

910.5
S5'7b

10
PUBLICATIONS OF THE SIERRA CLUB

No. 42

SIERRA CLUB BULLETIN

Vol. VII

No. 4



JUNE, 1910

SAN FRANCISCO, CALIFORNIA

1910

SIERRA CLUB BULLETIN

JUNE, 1910

Vol. VII.

No. 4

CONTENTS

GALEN CLARK *John Muir* 215
Plates LVIII., LIX., LX., LXI., LXII., LXIII.

THE GRAND CAÑON OF THE TUOL-
UMNE *Herbert W. Gleason* 221
Plate LXIV.

LITTLE STUDIES IN THE YOSEMITE
VALLEY *Francois E. Matthes* 222
Plate LXV.

THE NEW GLACIER NATIONAL PARK 225
Plates LXVI., LXVII., LXVIII., LXIX., LXX., LXXI.

THE ASCENT OF FUJIYAMI *Lena Martha Redington* 229
Plate LXXII.

THE PROPOSED ESTES NATIONAL
PARK *Enos A. Mills* 234
Plates LXXIII., LXXIV., LXXV., LXXVI.

WINTER IN THE HIGH SIERRA *Chas. H. Lee* 237
Plates LXXVII., LXXVIII., LXXIX., LXXX.

REPORTS:

Secretary's Report 244
Treasurer's Report 245

NOTES AND CORRESPONDENCE 247
Plates LXXXI., LXXXII., LXXXIII., LXXXIV.

FORESTRY NOTES 269

BOOK REVIEWS 272

All communications intended for publication by the SIERRA Club, and all correspondence concerning such publication, should be addressed to the Editor, Elliott McAllister, Room 302 Mills Building, San Francisco, California.

Correspondence concerning the distribution and sale of the publications of the Club with reference to advertising rates and space location, and concerning its business generally, should be addressed to the Secretary of the Sierra Club, Room 302 Mills Building, San Francisco, California.

This publication for sale at 302 Mills Building, San Francisco, and at Dawson's Book Shop, 518 South Hill Street, Los Angeles, also at De Witt & Snelling, 9 Telegraph Avenue, Oakland.





GALEN CLARK.

Aged 96.

Photograph furnished by courtesy of Pillsbury Picture Company.

SIERRA CLUB BULLETIN.

VOL. VII.

SAN FRANCISCO, JUNE, 1910.

No. 4

GALEN CLARK*

By JOHN MUIR.

Galen Clark was the best mountaineer I ever met in the Sierra, and one of the kindest and most amiable. I first met him at his Wawona ranch forty-two years ago on my first visit to Yosemite Valley. I had entered the valley with one companion by way of Coulterville and was returning by what was then known as the Mariposa Trail. The snow was still deep in the sugar-pine and silver-fir regions, obliterating not only the trails but the blazes on the trees. We had no great difficulty, however, in finding our way by the trends of the main features of the topography. Botanizing by the way, we made slow plodding progress and were again about out of provisions when we reached Clark's hospitable cabin at Wawona. He kindly furnished us with flour and a little sugar and tea, and my companion, who complained of the benumbing poverty of a strictly vegetarian diet, gladly accepted Mr. Clark's offer of a piece of a bear that had just been killed. After a short talk about bears and the forests we inquired the way to the Big Trees, pushed on up through the Wawona silver-firs and sugar-pines, and camped in the now famous Mariposa Grove. Later on, after making my home in the Yosemite Valley, I became well acquainted with Mr. Clark while he was Guardian. He was elected again and

*Galen Clark was born in the town of Dublin, Cheshire County, New Hampshire, March 28, 1814. He died March 24th of this year, thus having reached the great age of 96. He was buried in Yosemite Valley in a grave prepared by himself.

again by different Boards of Commissioners to this important office on account of his efficiency and real love of the valley.

Although nearly all my mountaineering has been done alone, I had the pleasure of having Galen Clark with me on three excursions. About thirty-five years ago I invited him to accompany me on a trip through the big Tuolumne Cañon from Hetch Hetchy Valley. The cañon up to that time had not been explored, and, knowing that the difference in the elevation of the river at the upper and lower ends of the cañon amounted to about 5,000 feet, we expected to find some magnificent cataracts or falls; nor were we disappointed. It was while exploring this rough cañon that Mr. Clark's skill and endurance as a mountaineer was displayed. Before leaving Yosemite Valley for Hetch Hetchy to begin our hard trip, a Yosemite tourist, an ambitious young man, begged leave to join us. I strongly advised him not to attempt such a trip, as nothing was known of the cañon, and on account of its great depth and length it would undoubtedly prove very trying to an inexperienced climber. He assured us, however, that he was able for anything, would gladly meet every difficulty as it came, and cause no hindrance or trouble of any sort; so at last, after repeating our advice that he give up the trip, we consented to his joining us. We entered the cañon by way of Hetch Hetchy Valley, each carrying his own provisions and making his own tea, porridge, beds, etc.

In the morning of the second day out from Hetch Hetchy we came to what is now known as the Muir Gorge, and Mr. Clark without hesitation began to force a way through it, wading and jumping from one submerged slippery boulder to another through the torrent, bracing himself with a stout pole. Though then at a time of rather low water, the roar and swift surging of the current was nerve-trying. I managed to get our adventurous tourist safely through the gorge by lending a hand at the wildest places, but this experience, naturally



MUIR GORGE—GRAND CAÑON OF THE TUOLUMNE.

From photograph by Herbert W. Gleason, 1909.



CALIFORNIA FALLS—GRAND CAÑON OF THE TUOLUMNE.

From photograph by W. L. Huber, 1909.

enough, proved too much, and he informed us that he could go no further. I gathered some wood at the upper throat of the gorge, made a fire for him and advised him to feel at home and make himself comfortable, and hoped he would enjoy the songs of the water-ousels which haunted the gorge, assuring him that we would return some time that night, though it might be late, as we wished to go on through the entire cañon if possible. We pushed our way through the dense chaparral and over the earthquake taluses with such speed that we reached the foot of the upper cataract while we had still an hour or so of daylight for the return trip. It was long after dark when we reached our adventurous but nerve-shaken companion, who, of course, was anxious and lonely, not being accustomed to complete solitude. Not attempting either to return down the gorge in the dark or to climb around it, we concluded to spend the night where we were, without blankets or provisions, which we had left in the morning hung up on trees at the foot of the gorge. I remember Mr. Clark remarking that if he had his choice that night between provisions and blankets he would choose his blankets. We had a good fire and suffered nothing worth mention, although we were hungry.

The next morning in about an hour we had crossed over the ridge through which the gorge is cut, reached our provisions, made tea and had a good breakfast, and finished the preliminary exploration of about three-fourths of the cañon. As soon as we had returned to Yosemite I obtained fresh provisions, pushed off alone up to the head of Yosemite Creek basin, entered the cañon by a side cañon, and completed the exploration up to the Tuolumne Meadows.

It was on this first trip from Hetch Hetchy to the upper cataracts that I had such convincing proofs of Mr. Clark's daring and skill as a mountaineer, particularly in fording torrents and in forcing his way through thick chaparral. I found it somewhat difficult to keep up with him in dense tangled brush, though in jumping on

boulder taluses and slippery cobble-beds I had no difficulty in leaving him behind.

After I had discovered the glaciers on Mt. Lyell and Mt. McClure, Mr. Clark kindly made a second excursion with me to assist in establishing a line of stakes across the McClure glacier to measure its rate of flow. On this trip we also climbed Mt. Lyell together, when the snow which covered the glacier was melted into upleaning icy snow blades which were extremely difficult to cross, not being strong enough to support our weight, nor offering any level spaces between them for steps. Here, being lighter, I kept ahead of Mr. Clark, who, at each awkward fall he had, would gaze at the marvelous ranks of leaning snow blades and say: "I think I have traveled all sorts of roads and rock-piles, and through all kinds of brush and snow, but this gets me."

Mr. Clark, at my urgent request, joined my small party on a trip along the range to the Kings River Yosemite, most of the way without any trail. He joined us at the Mariposa Big Tree Grove and intended to go all the way, but finding that the time required was much greater than he expected, on account of the difficulties encountered, he turned back near the head of the north fork of the Kings River.

In cooking his mess of oat-meal porridge and making tea, his pot was always the first to boil; and I used to wonder why, with all his skill in scrambling through brush in the easiest way and preparing his meals, he was so utterly careless about his beds. He would lie down anywhere on any ground, rough or smooth, without taking pains even to remove cobbles or sharp-angled rocks protruding through the grass or gravel, saying that his old bones were as hard as the rocks.

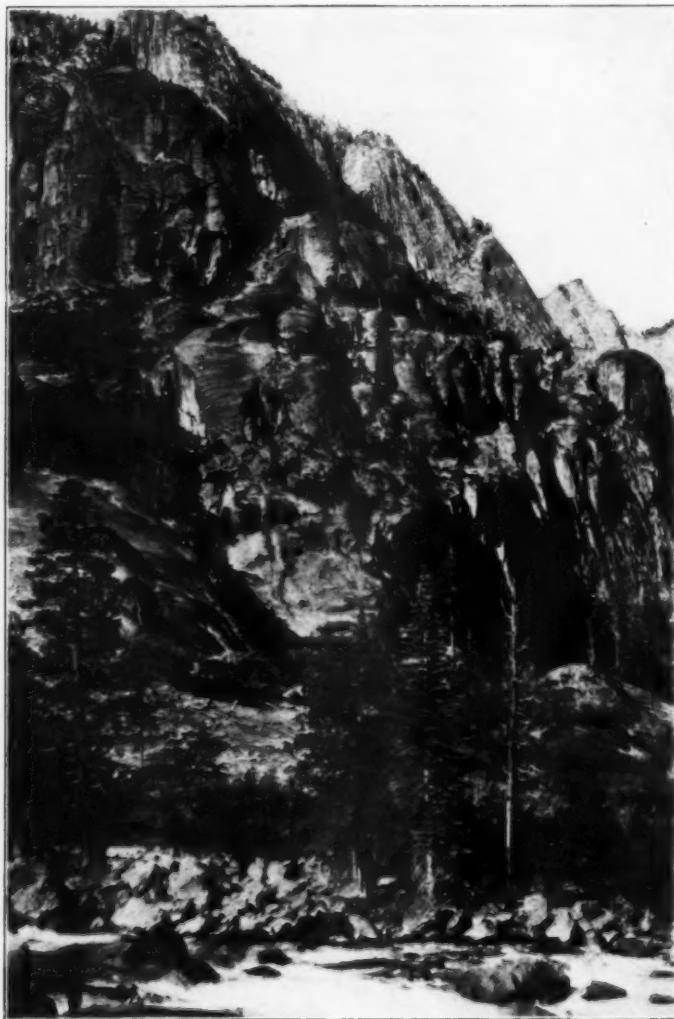
His kindness to Yosemite visitors and mountaineers was marvelously constant and uniform and brought him the sincere respect of all he met.

He was not a good business man, and in building a large hotel and barn at Wawona before the travel to



LE CONTE FALLS—GRAND CAÑON OF THE TUOLUMNE.

From photograph by Herbert W. Gleason, 1909.



CLIFFS FLUTED BY GLACIER—GRAND CAÑON OF THE TUOLUMNE.

From photograph by Herbert W. Gleason, 1909.

Yosemite had been greatly developed, he borrowed money, mortgaged his property and lost it.

Though not the first to see the Mariposa Big Tree Grove, he was the first to explore it, after he had heard from a prospector who had passed through it that there were some wonderful big trees on the Wawona ridge, perhaps as big as the Sequoias, which had become so famous and well known in the Calaveras Grove. On this indefinite information Galen Clark told me he went up the ridge, thoroughly explored the grove and described it. In this sense he may be said to be the real discoverer of the grove. He then explored the forest to the southward and discovered the much larger Fresno Grove of about two square miles, six or seven miles distant from the Mariposa Grove. Most of the Fresno Grove, unfortunately, has been cut down and made into lumber.

Mr. Clark was truly and literally a gentle-man. I never heard him utter a single hasty angry fault-finding word. His voice was uniformly pitched at a rather low tone, perfectly even, although glances of his eyes and slight intonations of his voice oftentimes indicated that something funny or mildly sarcastic was coming, but upon the whole he was serious and industrious, and however fun-provoking a story might be he never indulged in loud, boisterous laughter.

He was very fond of scenery and often told me that he liked "nothing in the world better than climbing to the top of a high ridge or mountain and looking off." But above all, he preferred the mountain ridges and domes in the Yosemite region on account of their noble grandeur and the glorious beauty of the falls and forests about them. Oftentimes he would take his rifle, a few pounds of bacon, a few pounds of flour and a single blanket and go off hunting, for no other reason than to explore and get acquainted with the most beautiful points of view within a journey of a week or two from his Wawona home. On these trips he was always alone and could indulge in tranquil enjoyment of Nature to his heart's content. He

said that on those trips, when he was at a convenient distance from home in a neighborhood where he wished to linger, he always shot a deer, and, after eating a considerable part of it, loaded himself with the balance of the meat on his way home. In this way his cabin was always well supplied with venison, and occasionally with bear-meat and grouse, and no weary traveler ever went away from it hungry.

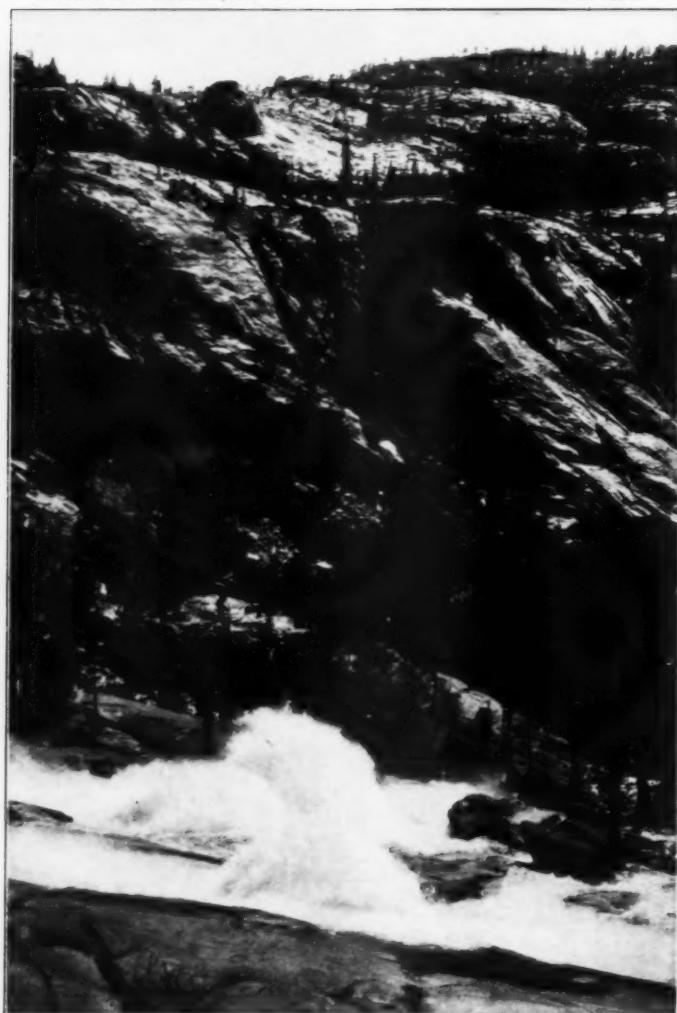
The value of mountain air in prolonging life is well exemplified in the case of Mr. Clark, who, while working in mines, had contracted a severe cold that settled on his lungs and finally caused severe inflammation and bleeding. None of his friends thought he would ever recover, for the physicians told him he had but a short time to live. It was then that he repaired to the beautiful sugar-pine woods at Wawona and took up a claim, including the fine meadows there, built his cabin and began his life of wandering and exploring in the adjacent neighborhood, usually going bareheaded. In a remarkably short time his lungs were healed.

He was one of the most sincere tree lovers I ever knew. About twenty years before his death he made choice of a plat in the Yosemite cemetery on the north side of the valley, not far from the Yosemite Fall, and selecting a dozen or so of seedling Sequoias in the Mariposa Grove he brought them to the valley and planted them around the ground he had chosen for his grave. The soil there is gravelly and dry, but by careful watering he finally nursed most of them into good, thrifty, hopeful saplings that doubtless will long shade the grave of their friend and lover.



CLIFFS OF THE GRAND CAÑON OF THE TUOLUMNE.

From photograph by Herbert W. Gleason, 1909.



WATER WHEELS (20 TO 30 FT. HIGH) IN ONE OF THE CATARACTS
OF THE GRAND CAÑON OF THE TUOLUMNE.

From photograph by Herbert W. Gleason, 1909.

THE GRAND CAÑON OF THE TUOLUMNE

BY HERBERT W. GLEASON.

I consider the Grand Cañon of the Tuolumne one of the finest displays of scenic grandeur within the limits of the United States. I have spent a month in Alaska, twice visited the Grand Cañon of Arizona, twice toured Yellowstone Park, spent six summers in the Canadian Rockies, and three summers on the Pacific Coast,—in fact, I have seen most of the notable scenery of the American continent,—and I unhesitatingly affirm that the Grand Cañon of the Tuolumne River deserves to rank, in its sublime impressiveness, stupendous majesty, and rugged beauty, with anything that this country affords. The Grand Cañon of the Colorado is, of course, superior in its vast extent and its brilliant coloring; yet the Tuolumne Cañon, by reason of the fact that its perpendicular walls, 4,500 to 5,000 feet in height, are as a rule less than a mile apart at their base, while the walls of the Colorado Cañon are from ten to fifteen miles apart, produces a sense of overwhelming grandeur which not even the great Arizona Cañon can give. Through the length of the cañon for twenty miles flows the Tuolumne River in a constant succession of magnificent waterfalls and cascades, some of which, though not as lofty, are more uniquely beautiful than the famous falls of the Yosemite Valley.

LITTLE STUDIES IN THE YOSEMITE VALLEY*

BY FRANCOIS E. MATTHES.

I. THE EXTINCT EAGLE PEAK FALLS.

At one time in its history the Yosemite Valley boasted one more great waterfall than it does today—or, to be more accurate, a group of falls. A sheer 1,500 feet they plunged, like a cluster of Yosemite Falls coming down together, mingling their spray. No human being was privileged to behold them, it is safe to say, for it was only during glacial times that they existed, at a period when the Yosemite Valley was filled with ice to a depth of some 2,000 feet, and even the little upland valleys tributary to it were smothered under glaciers of considerable size. Only the upper portion of the falls was visible, most likely, while their foot must have been deeply ensconced below the surface of the Yosemite glacier, in a chasm of their own fashioning, between ice and valley wall.

But, it may be asked, if there was no human witness how do we know that this picture is correct? What evidence have we of the existence of the falls, of their location or of the glacial character of their setting?

It is a well-known characteristic of waterfalls that they cut back the cliffs over which they plunge. Both cliff and fall thus ever tend to retreat, and the rate of retrogression may under favorable conditions be rapid enough to be appreciable even in a few short years, as in the classic case of the Niagara Falls.

A waterfall leaping over the side of a steep-walled trough like the Yosemite Valley will therefore in time produce an embayment in the same, a recess breaking into the alignment of the cliffs. An excellent example on a

* Published by permission of the Director of the U. S. Geological Survey.

modest scale is that of the deep cove of the tiny Sentinel Fall, not far west of Sentinel Rock. Its real nature is perhaps best appreciated from a study of the new Geological Survey map of the Yosemite Valley. The contours, it will be seen, draw in abruptly at this re-entrant, a full quarter mile back from the regular valley side. Having accustomed the eye to the meaning of this feature, now glance across to the north side of the valley, to the place where the Yosemite Falls Trail begins its ascent. Its first flight of kinky zigzags leads up into an embayment or amphitheater with precipitous walls, almost horseshoe-shaped in plan. It is perhaps not so accentuated as the Sentinel Fall recess, but it is of ampler, grander proportions. The debris slope over which the trail ascends, it should be noted further, is of exactly the same nature as that at the foot of the Sentinel Fall. But, while these features alone would seem to suggest a fall-site, still, there is need of corroborative evidence of another sort, namely, some trace of a former stream channel above the cliff. And therein are we not disappointed: the channel, or group of channels, through which the water made its approach, are very much in evidence. Each one of them is carved in solid rock and may be readily followed on the ground to the very spot where its stream plunged over. The strongest lead to the head of the amphitheater, while the lesser ones cascade down the rock slopes nearby, only to enter the horseshoe lower down. There is no shadow of a doubt, then, in the light of this topographic evidence, that we have to do here with the site of an extinct group of falls.

Whence, however, came the streams that fed the falls? Following the channels upward we find them to be quite short, heading against the ridge that extends from Eagle Peak eastward and connects with the shapeless, timbered height sometimes called Eagle Tower. The principal ones come directly from the low pass in the middle of the ridge. There is no source of water here today—the place is dry and barren; but in the days of the ice reign

this was all quite different. The basin of the Eagle Peak Meadows was then filled with ice to a depth of several hundred feet. Strangely, too, the ice mass moved up the basin, or toward Eagle Peak. It was a lobe of the much mightier glacier that came down the valley of Yosemite Creek. That ice stream when at its highest, split upon the Eagle Tower and sent a portion of its volume up into this cul-de-sac. Indeed, it is this glacial occupancy that is responsible for the existence of the swampy Eagle Peak Meadows—they represent ground moraines overgrown with peat. Many high meadows in the Yosemite region are of similar origin.

The Eagle Peak lobe, apparently, breasted at times against the ridge described, as the occasional glacial cobbles on the same attest. From various places along its front, then, but especially through the central gap, it sent forth the streams that carved the channels to the fall-site. Judging by the size of the channels each of the streams may have equalled Yosemite Creek in volume.

How long these conditions lasted can only be conjectured at the best. They obtained only during the earlier ice advances, which were far more extensive in the High Sierra than the later ones. During the latter the glacier in the valley of Yosemite Creek did not rise high enough to send a lobe up into the Eagle Peak Meadows; instead it threw up lateral moraines across the mouth of that basin—the awkward boulder ridges among which the Eagle Peak trail now turns and twists.

Whether the Eagle Peak Falls were long-lived or not is, therefore, an indeterminate problem; but, whatever their period of activity may have been, this much is certain, that they were able while they lasted to cut back the wall of the Yosemite trough by a thousand feet or more, leaving a profound embayment that has endured to this day.



TOPOGRAPHIC MAP ILLUSTRATING THE SITE OF THE EAGLE PEAK FALLS.

(The White Cross marks the Site.)

By courtesy of the U. S. Geological Survey.



LAKE McDONALD—GLACIER NATIONAL PARK.

By Courtesy of the Kiser Photo Company,

Copyright 1909 by Kiser Photo Company, Portland, Oregon,
for Great Northern Railway.

THE NEW GLACIER NATIONAL PARK*

[The bill to establish the Glacier National Park in the Rocky Mountains south of the international boundary line, in the State of Montana, has just been passed by Congress and signed by the President. The following speech was made by Senator Carter of Montana when the bill was being considered by the Senate:]

Mr. President, upon the general policy of public parks I am sure there can be but one opinion. Public parks in the cities of the country are a benediction to the people residing in densely settled districts. The national parks of the United States are all too few in number for the pleasure and accommodation of the people of the United States.

No one who has ever visited the Yellowstone National Park can fail to realize that it would have been a public calamity to have permitted that wonderland to have passed into private ownership. Thousands of people visit that park from all portions of this country and from nearly all parts of the world every year. It is a source of pride to the American people. It is a pleasure ground which will grow in favor as the years go by.

The section which it is proposed by the bill to establish as a park is entirely different from the Yellowstone National Park in many respects. The park embraces an area of about 1,400 square miles. It is between 30 and 40 miles in width and about 50 miles in length. For boldness of scenery, for the beauty of the lakes and the waterfalls, and for the remarkable glacial deposits eternally resting there, it is distinctly unique in all the world's remarkable scenery. There are 16 living glaciers within the limits of this proposed park.

The construction of wagon roads will probably not be resorted to in this park to any considerable extent. It is an extremely rugged country. Cliffs rising thousands of

* For further information concerning this park see article by Guy Elliott Mitchell in *The National Geographic Magazine* for March, 1910.

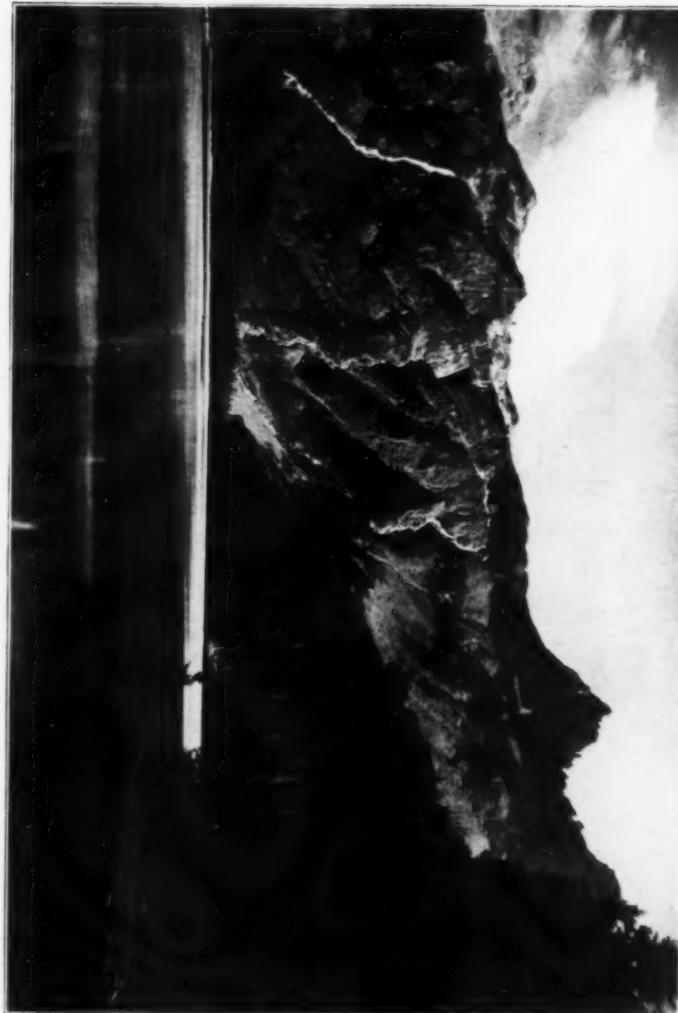
feet perpendicularly, great waterfalls, glaciers, forests, and all that go to make bold and unique scenery can be reached best over ordinary horse trails. It would be exceedingly difficult to construct wagon roads through the greater portion of the park. There will be a railroad immediately to the west of it. There is one to the south of it now. There will be one or two entrances from each of these roads, and at these respective entrances persons, I suppose, will in the future be able to obtain pack animals and saddle horses with which to make tours of inspection through that rugged and wonderful country.

The Canadian government has in contemplation the addition of a like area to the north of the line, this being with a view to providing a refuge for the wild game which now abounds, but which will not long continue in that open and unprotected region.

I think this park contains the last distinct habitat of the mountain sheep within the limits of the United States. A senator who has visited the place recently spoke of ascending one of the pinnacles or cliffs and observing the mountain sheep going down to an ancient lick, where salt oozed out of the side of the cliff. He said that these sheep had been traveling down that mountain cliff until they had worn pathways through the solid rock along the trail, and that sometimes these gashes in the rocks reached as deep as two feet. Through all the centuries those interesting animals have been visiting that spot. It is surely desirable that this last retreat of this rare class of animals should be preserved in some manner from invasion, so as to avert extermination.

Mountain goats abound there also; and it is believed that it would be well to set apart this limited patch of ground in all the vast extent of the Rocky Mountains where these animals can repair in peace to abide and propagate their kind and prevent the extinction of that species.

Congress will not be extravagant, Mr. President, in making appropriations for building trails, but Congress



AVALANCHE LAKE—GLACIER NATIONAL PARK.

By Courtesy of the Kiser Photo Company,

Copyright 1909 by Kiser Photo Company, Portland, Oregon,
for Great Northern Railway.



"GLACIERS, FORESTS AND ALL THAT GO TO MAKE BOLD AND UNIQUE SCENERY."

By Courtesy of the Kiser Photo Company,

Copyright 1909 by Kiser Photo Company, Portland, Oregon,
for Great Northern Railway.

will in time, and without fail, respond to a demand from the people to make accessible such remarkable scenic wonders as are to be found in that locality alone.

Two hundred million dollars of the good money of the people of the United States are paid out annually by Americans who visit the mountains of Switzerland and other parts of Europe. I would that our people might direct their course to our own grand mountains, where scenery equal to that to be found anywhere on this globe may be seen and enjoyed.

The time will come, Mr. President, when our successors here will thank us for having taken appropriate action in due season to preserve from vandalism and invasion the few remaining places of striking grandeur and interest belonging to the Government on this continent.

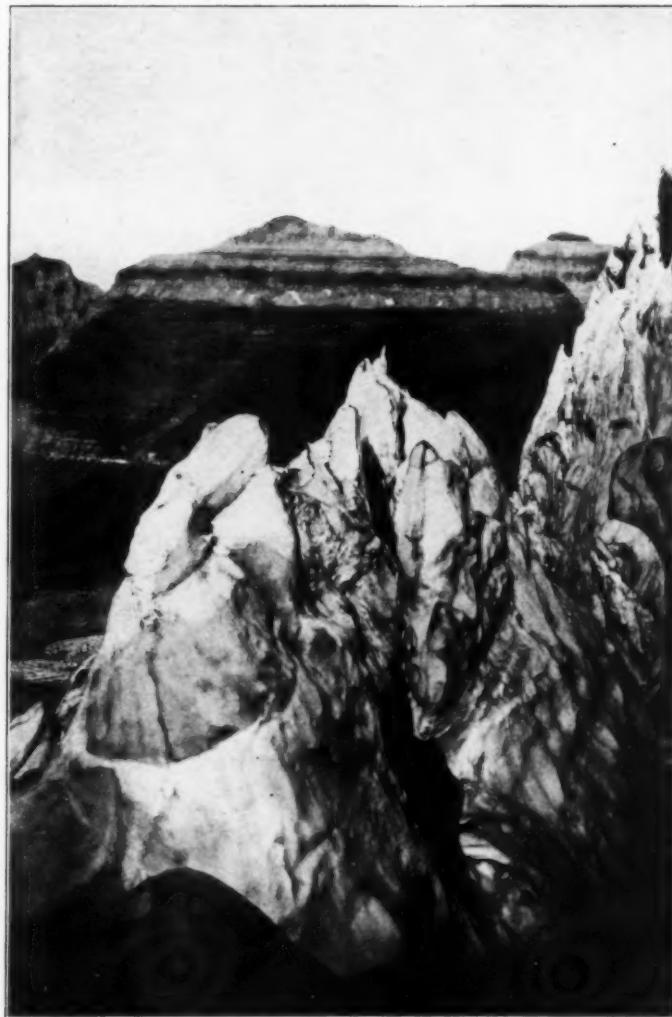
**AN ACT TO ESTABLISH "THE GLACIER NATIONAL PARK" IN THE
ROCKY MOUNTAINS SOUTH OF THE INTERNATIONAL
BOUNDARY LINE, IN THE STATE OF MONTANA,
AND FOR OTHER PURPOSES.**

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the tract of land in the State of Montana particularly described by metes and bounds as follows, to wit: Commencing at a point on the international boundary between the United States and the Dominion of Canada at the middle of the Flathead River; thence following southerly along and with the middle of the Flathead River to its confluence with the Middle Fork of the Flathead River; thence following the north bank of said Middle Fork of the Flathead River to where it is crossed by the north boundary of the right of way of the Great Northern Railroad; thence following the said right of way to where it intersects the west boundary of the Blackfeet Indian Reservation; thence northerly along said west boundary to its intersection with the international boundary; thence along said international boundary to the place of beginning, is hereby reserved and withdrawn from settlement, occupancy, or disposal under the laws of the United States, and dedicated and set apart as a public park or pleasure ground for the benefit and enjoyment of the people of the United States under the name of "The Glacier National Park"; and all persons who shall locate or settle upon or occupy the same, or any part thereof, except as hereinafter provided, shall

be considered trespassers and removed therefrom: *Provided*, That nothing herein contained shall affect any valid existing claim, location, or entry under the land laws of the United States or the rights of any such claimant, locator, or entryman to the full use and enjoyment of his land: *Provided further*, That rights of way through the valleys of the North and Middle forks of the Flathead River for steam or electric railways may be acquired within said Glacier National Park under filings or proceedings heretofore or hereafter made or instituted under the laws applicable to the acquisition of such rights over or upon the unappropriated public domain of the United States, and that the United States Reclamation Service may enter upon and utilize for flowage or other purposes any area within said park which may be necessary for the development and maintenance of a government reclamation project: *And provided further*, That no lands within the limits of said park hereby created belonging to or claimed by any railroad or other corporation now having or claiming the right of indemnity selection by virtue of any law or contract whatsoever shall be used as a basis for indemnity selection in any State or Territory whatsoever for any loss sustained by reason of the creation of said park.

Section 2. That said park shall be under the exclusive control of the Secretary of the Interior, whose duty it shall be, as soon as practicable, to make and publish such rules and regulations not inconsistent with the laws of the United States as he may deem necessary or proper for the care, protection, management, and improvement of the same, which regulations shall provide for the preservation of the park in a state of nature so far as is consistent with the purposes of this Act, and for the care and protection of the fish and game within the boundaries thereof. Said Secretary may, in his discretion, execute leases to parcels of ground not exceeding ten acres in extent at any one place to any one person or company, for not to exceed twenty years, when such ground is necessary for the erection of buildings for the accommodation of visitors, and to parcels of ground not exceeding one acre in extent and for not to exceed twenty years to persons who have heretofore erected or whom he may hereafter authorize to erect summer homes or cottages; he may also sell and permit the removal of such matured, or dead or down timber as he may deem necessary or advisable for the protection or improvement of the park.

Approved, May 11, 1910.



BLACKFOOT GLACIER—GLACIER NATIONAL PARK.

By Courtesy of the Kiser Photo Company.

Copyright 1909 by Kiser Photo Company, Portland, Oregon,
for Great Northern Railway.



BEAUTIFUL LAKES NESTLE IN BASINS HOLLOWED OUT BY
PREHISTORIC GLACIERS.

By Courtesy of the Kiser Photo Company.

Copyright 1909 by Kiser Photo Company, Portland, Oregon,
for Great Northern Railway.



ANOTHER VIEW OF LAKE McDONALD.

By Courtesy of the Kiser Photo Company.

Copyright 1909 by Kiser Photo Company, Portland, Oregon,
for Great Northern Railway.

MT. FUJIYAMA—JAPAN.



SIERRA CLUB BULLETIN, VOL VIII.

PLATE LXXII.

THE ASCENT OF FUJIYAMA

BY LENA MARTHA REDINGTON.

If one is fortunate enough, the first view of Fuji-san, as the mountain is more commonly called by the Japanese, is from the ship as one sails into Yokohama Bay. Very early in the morning the deck is crowded with expectant tourists, even before it is quite light. They watch in the direction where they think it should be. They ask information from a Japanese passenger. And there, higher, much higher than they had thought to look, in the pink dawn floats the pale, snowy cone of the great summit. The base is forever hidden from view by fleeting blue mists and yellow hazes.

At Miyanoshita is to be found the very best hotel in all Japan. There one can sojourn for a week or so, enjoying the pretty walks in every direction. A week on the soft slopes of the surrounding hills puts one in better condition for mountain climbing than the three preceding weeks on the hard, level deck of a large ocean liner. Almost every walk leads to a dainty tea-house, where one rests in the toy landscape garden of fountains, lakes and flowers. Though tea has been served but ten minutes before where one stopped to enjoy the view, it is impossible to resist the low bow and the attracting smile as the dainty tray is extended. Every tea-house is so arranged that Fuji-san is sure to be in view if the atmosphere permits—the same ghostly, delusive Fuji that one sees on each tray, cup, screen and kakemono of Japanese fabrication. But unfortunately a perfectly cloudless view is not always to be relied upon in mid-summer. It is interesting to watch the curtain of clouds rise and fall until an uncontrollable desire to climb that mountain obsesses one.

The little village of Gotemba is ten miles distant from Miyanoshita. The way leads first along a roaring river,

then up the steep ascent of the Otome-toga, or Maiden's Pass, with its wonderful view, and down into the fertile plain of rice fields in which Gotemba is situated. Frequently the night is passed in Gotemba, but if there is still time it is better to go on to Subashiri, five miles nearer the base of the mountain. These five miles can be taken by means of a little tramway. Some misfortune had happened to our schedule, so that two cars found themselves face to face on the same track. It is not an inconvenience that everything in Japan is so tiny. It was finally decided to set one car off the track, lay it over on its side and let the other pass. Everybody helped; everybody laughed, and the work was quickly accomplished.

At Subashiri there is the pleasure of trying a real Japanese inn, for there is not a European one in the village. Both Gotemba and Subashiri are gay with flapping banners, bearing inscriptions in Japanese. It seems that this is the way of advertising the inn. A flag reads that Mr. So-and-so stayed at this inn and found it very comfortable. As every Japanese man is supposed to climb the sacred mountain at least once in his life to pray at the altar of the sun, it may be readily imagined that the breezes of these two villages, as well as of those on the Yoshida side of the mountain, waft to the approaching traveler a good impression of the inns. Boots must be taken off before the inn can be entered. A hot bath is offered, including a clean kimono to put on afterwards, and then a good supper of soup, fish, rice, eggs, and hot milk is brought up to one's room, where one eats, seated on the floor. A dear, laughing little butterfly also seats herself on the floor in case anything should be wanted from the kitchen. Later she spreads the heavy bedding on the floor, for, of course, there are no beds.

On the second morning the start is made before dawn. The first seven miles are usually made on horseback, as there is a rise of about 2,000 feet through very loose cinders. The last part of the horseback ride is through

a fragrant wood of maples, birches and dog-woods, with hazels and ferns and grasses for lower growth. At the edge of the timber line is an inn with a chapel attached—the chapel of Ko-mitake. Here staves are sold, with the white towel that is to be tied about the forehead, knotted picturesquely in back. The towel bears a sacred inscription. All pilgrims making the ascent for the first time wear white clothes and tinkling little bells.

Then begins the long, slow, easy climb. Soon all plants have disappeared, leaving nothing but the loose, gray, volcanic rocks. There is nothing at all difficult about the climb of Fuji-san. It is only its great length that makes it unattractive to most people—12,600 feet rising at one slope from the level of the sea. Subashiri is about 3,000 feet high. To break the route on the east side, the Subashiri side, there are nine rest-houses, built in the very sides of the mountain and commanding excellent views in varying stages of déchéance. At each station the staff must be marked with the stamp of the station. Tea and cake are offered. One is welcome to pass the night there if one is too tired to proceed or if the weather becomes unfavorable. In fact rest-house No. 8 is a large inn where many people prefer to remain over night, as it is more protected from the cold, howling wind. The only really steep, hard portion of the climb is up the lava dykes which are between stations 8 and 9—not a very attractive prospect if one begins to feel jaded. But we had decided to sleep in the inn on top. At number 9 is a tiny temple through which one must pass—Makai-Sengen, "Goddess of Fuji's Welcome." Station number 10 is the inn on the summit.

It was not too late that same afternoon for us to make the tour of the deep crater, two and one-half miles around and two thousand feet across. The ground has a hollow resonant sound as one walks. Ladders must be used occasionally in case of sheer walls. There are fumes everywhere, blue and yellow steam, which render it necessary to walk very fast in certain directions. On the west

side of the cone are the temple, the sacred well, and the post office, for there is a large colony of priests and curio-sellers, who inhabit the stone huts during the months of July and August. On this particular evening there were many clouds, in fact we had had, more or less, all day that sensation of being in a balloon above a sea of fleece—broken at various intervals to permit glimpses of sea, lakes, hills and farm lands. Now in the late afternoon we were entirely closed in by the fleecy white clouds far below us on which Fuji cast its black triangle of shadow. Gradually the clouds became flushed with pale vapory colors, giving way to ruddier, tawnier tones, almost fierce in their black bronze effects. It was night; clear, cold and windy.

The summit inn is extremely rude but strong, as it must be, for the wild storms that so often visit the mountain. It consists of one large room,—curtailed to make two if ladies are present—in which are to be found braziers of charcoal for heating, and steaming pots of soup, and of water for the never-failing tea. Again boots must come off before walking on the very clean matting.

The sunrise the following morning was the richest, gayest one I have ever seen—rose and yellow intermingled at first with a white mist. Then as the great sun came above the horizon, all was crimson and orange. The few pale stars which were left faded away. For a short space of time there was that great silence which comes with a climax. The heart beats loud with joy. Pilgrims were kneeling at prayer. But soon the whole mountain was ringing with little silver bells, while everywhere came the happy voices of the white-robed worshippers. As we moved downwards they were coming up from the inn at Refuge No. 8, to pass the day on top, and to sleep again a second night with the monks at No. 8.

A different route is chosen for the descent, a steeper one through soft cinders, by means of which one can make long, rapid strides to the base. A few rests suffice on the downward way, rests necessary for the guides and

porters to change their straw *waraji*. It would be impossible to miss the way down, for the entire path is strewn with these cast-off straw sandals. We reached Subashiri in time for a later breakfast and walked on back to Miyanoshita all the same day, two nights and three days having been taken for the trip.

THE PROPOSED ESTES NATIONAL PARK

BY ENOS A. MILLS.

Estes Park, Colorado, and its scenic surroundings has been named as a place well worthy of being perpetuated as a national playground and is before the public as the proposed Estes National Park and Game Preserve. The scenery of this splendid hanging wild garden, its climate, accessibility, and the perishable nature of many of its attractions, all tell that its resources should be used and perpetuated in a National Park.

One corner of the proposed park is only fifty miles from Denver, and the area named for it measures forty-two miles east and west by twenty-four miles north and south. The greater portion of the region lies above the altitude of 7,000 feet, and in it is the great Long's Peak, and, says Hayden, "one of the most rugged sections of the Continental Divide of the Rocky Mountains." Within the boundary proposed also is the Mummy Range, together with short sections of the Rabbit Ear and the Medicine Bow ranges.

Standing within the proposed area are eighteen peaks that rise above the altitude of 13,000 feet, the highest being Long's Peak, which rises 14,259 feet above the tides. There are numerous short, deep, rugged cañons; the longest, most poetical and best known of these is the Big Thompson and the North St. Vrain.

Timber-line, in this region, is about 11,000 feet, and downwards from this altitude many of the mountains wear purple robes of forest primeval. In these forests there are numerous fire scars. The most common species of trees are yellow pine, Douglas spruce, silver spruce, sub-alpine fir, lodge pole pine, Engelmann spruce and the merry, childlike aspens.

The Grand River drains the Pacific slope of this section,



ESTES PARK FROM TOP OF MT. OLYMPUS

The Big Thompson River.

By courtesy of Enos A. Mills.



BEAR LAKE WITH LONGS PEAK AND UPPER SLOPES OF GLACIER GORGE IN THE BACKGROUND.

By courtesy of Enos A. Mills.

BEAR LAKE WITH LONG'S PEAK AND UPPER SLOPES OF GLACIER GORGE IN THE BACKGROUND.

By courtesy of Enos A. Mills.

SIERRA CLUB BULLETIN, VOL VII.

PLATE LXXV.



FERN LAKE—ESTES PARK.

By courtesy of Enos A. Mills.



THE HALLETT GLACIER—ESTES PARK.
By courtesy of Enos A. Mills.

while through the cañons and over the terraces on the eastern slope foam and tumble numerous streams of white waters which unite in the Poudre, Big Thompson and the St. Vrain rivers, all of which join the Platte out on the plains.

The best-known lakes of the region are Grand, Odessa, Chasm and Gem. Altogether there are upwards of fifty glacier lakes; while most of these are small and lie above the altitude of 11,000 feet, each carries a charm or a wild ruggedness of its own.

The three named glaciers are Hallett, Sprague and Andrews; these are shelf glaciers, and, though not large, are picturesque and every inch chips of the old Ice King. The many glaciated gorges, together with numerous and enormous moraines, and the arrangement of these, make one of the most interesting of ice stories that is recorded in the mountains of the west.

The climate of the section may be called excellent; it is never extremely cold; the snowfall is not heavy, while the surface conditions are such that the entire region can be made accessible with comparatively little expenditure for road building.

Each season it is graced and charmed with more than a thousand varieties of wild flowers. Here in abundance grow the fringed blue gentians, mariposa lilies, violets, larkspur, alpine primroses, hare-bells, the Rocky Mountain columbine, several species of orchids, the wild red rose and scores of other favorite, handsome blossoms.

Among a numerous variety of bird life is the matchless singer the solitaire, the hermit, robin, bluebird, crested jay, ptarmigan, white-crowned sparrow, rosy finch, and the daring water ouzel.

Here numerous beaver colonies maintain their poetic ponds and primitive homes, and here, too, is the interesting companion of the crags and "eternal snows"—the mountain sheep. A few elk, bear and deer still survive.

There are about 20,000 acres of private holdings within the bounds of the proposed park, but the greater portion

of its area is public land, most of which is already set aside as a part of the Medicine Bow National Forest.

It is asked by those who are urging this park that private holdings remain undisturbed and no land be bought by the Government in establishing this park. It is also asked that, on public lands, mining and prospecting be allowed to go on under regulations imposed in National Forests. (The region is largely non-mineral and there is not a paying mine in it.) Grazing and timber-cutting on public lands should be restricted to local use and be under forest service regulations.

Shooting, and the killing of any animal, should be prohibited within this area. If it should be necessary from time to time to kill dangerous or predaceous animals it should be done by or under the directions of park officials.

It is also requested that the forests, fish, flowers and foliage on the public land be protected from destructive agencies or excessive use.

The proposition is for the general welfare, and the people and the press of Colorado are almost unanimous in advocating it. However, a few politicians and some selfish interests are bitterly, aggressively opposing it.

Albert Bierstadt, Helen Hunt, Anna Dickinson and numerous authors and artists of note have paid this region the highest of tributes. The Appalachian Mountain Club brought out an entire book concerning it—"Mountain-eering in Colorado," by Frederick H. Chapin.

Dr. F. V. Hayden, father of Yellowstone Park, says of Estes Park: "Not only has nature amply supplied this valley with features of rare beauty and surroundings of admirable grandeur, but it has thus distributed them that the eye of an artist may rest with perfect satisfaction on the complete picture presented."

WINTER IN THE HIGH SIERRA

By CHARLES H. LEE.

Occasionally, when the Sierra Club Outing is held in the Kern Basin or in the King's River Cañon region, small parties travel down from the summit into Owens Valley and find much to interest them in the sleepy little towns at the hem of the mountain-skirts. Few would consider it a privilege, however, to live in one of these towns the year round, even though they were within the shade of the High Sierra. But plenty of interesting work makes any place livable.

The majestic eastern face of the Sierra Nevada has a strange power over people who live in the valley, which grows stronger with each returning season. It is commonly said by the settlers that Owens River water is to blame—that one drink of the magic liquid will so change a man that the summit of happiness consists in living in Owens Valley; and it certainly is true that the natives never wander far from the borders of Inyo County. But whether realized or not, these mountains have a power to attract, and grow to be so much a part of one's life that when separated from them there is always the desire to return.

Their greatest interest lies perhaps in the infinite variety of color and detail which depend upon the position of the sun, atmospheric conditions, and the seasons. At no two hours is the view the same. There is a constant change every hour of the day and every day of the year. To the native Californian the changes that come with cooling temperature in the fall and winter are very new and strange. In September there appear spots of gold high up on the mountains at the stream fountains. Gradually these lengthen into bands which follow down the stream courses and soon become enriched with the scarlet

autumn colors of the birch. Then in November a spot of yellow or scarlet appears in the open valley, and in a few days great masses of color brighten the landscape on every side. It is about this time that the mountain streams begin to freeze, and some that are not protected by vegetation are often at a complete standstill, reminding one of the condition which occurs on a city street when the power fails on a crowded car line.

Then some day in December the sky turns gray and night closes down at sunset, which at that time of the year is half past three in the afternoon. Out in the open one hears a murmuring and whispering from the mountains, broken by muffled roaring. Softly and quietly the cloud envelopes mountain and valley and soon through the darkness great white flakes come sifting down. When daylight returns the storm may lift from the valley and give the "old timers" a chance to gather and affirm that this is the biggest snow-storm since way back in the '60's, but all day, and perhaps longer, the mountains will be hid in clouds. The unveiling reveals a wall of white marble, magnificently sculptured, standing bold against the sky, with possibly a shining banner streaming southward from some high peak.

After such a storm is the time to see the animal life of the mesa and foothills. Beneath and within the stiff desert shrubs are warm shelters which the snow cannot fill, and here birds and rabbits hide and feed on the seeds which the fall winds have deposited around each obstruction. As soon as the warm sunshine returns bobcats and lynx are out on the soft snow hunting for a good meal, and they have not far to go. First, a rabbit comes crawling out through the top of a bush, and before he has time to shake the snow from his eyes he is pounced upon, and nothing remains to tell the story but a little fur and blood-stained snow. Then a flock of quail feel the warmth and work out one by one, only to feed the hungry cat who sits at the outlet of their shelter. Further up on the foothills one can often see a herd of deer which



BULLFROG LAKE REGION FROM KEARSARGE PASS.



KEARSARGE PINNACLES FROM THE PASS.

have been driven down out of the high mountains by the cold, and sometimes the tracks of a mountain lion.

The high mountains, however, are without life from the time of the first big snow-storm until late in May. The creeks are frozen over and buried many feet deep under the snow, and unless there is a wind roaring among the summit peaks not a sound breaks the great stillness. One feels more alone there than out on the open desert and is apt to find the magnificent scenes oppressive.

In early May, 1908, my work led me up into the southern limits of the High Sierra as far as the base of the cliff which drops off sheer from the summit of Mt. Langley on the east. The snow was well crusted and traveling easy from a base camp on Cottonwood Creek at the 9,000-foot level. The temperature at night was quite low and remained below freezing for a few hours after sunrise. Our horses discovered this to their sorrow when they went into a slushy meadow to feed. The water that splashed onto their tails froze solid, and in a few minutes each horse had a solid club of ice hanging down behind, which caused considerable excitement when discovered. This appendage remained until late in the morning.

Snow lay about six feet deep on the level cirque floor at the base of Mt. Langley. The long chain of lakes was still frozen over, but at the outlet of one the ice had broken through, exposing nearly one hundred feet of shallow stream channel. Lying in the pools and under projecting rock ledges were fifteen or twenty magnificent specimens of golden trout, enjoying the bright sunlight after the long, dark winter under the ice. As we were approaching this pool a wolverine jumped up and ran into the timber. It had apparently been fishing, for there were no signs of any other game near by.

It is only occasionally that anyone attempts to climb to high elevations in the Sierra Nevada during the winter months. The trip made by Prof. Church and Mr. Marsh up Lone Pine Creek to an elevation of over 13,000 feet is described in the SIERRA CLUB BULLETIN of

June, 1909. In late February of the present year another attempt was made by two residents of Lone Pine to climb to the summit of Mt. Whitney, but the snow was so soft that they turned back after reaching an elevation of 10,000 feet. An easier trip, and one that affords almost as magnificent scenery, is that up the cañon of Independence Creek to the summit of the range at Kearsarge Pass. The writer, with two companions, reached an elevation here of 12,000 feet in early April of this year with very little difficulty.

The start was made from a camp at the 6,000-foot level in a little meadow at the mouth of the cañon. The distance to the summit from this camp is about equal to that from the mouth of Lone Pine Cañon to the Pass, and the difference in elevation is 1,000 feet less. As it was planned to make the whole trip in a day there were no burdens to carry, and all our attention and energy were given to the climb.

Below the 8,500-foot level, snow lay in small patches and in the early morning was frozen so that an easy climb of two hours and a half found us in Onion Valley, still fresh and hopeful. The Pass is not visible from here, but the summit of Independence Peak to the south of the Valley is at about the same elevation, and as we looked up and up its steep north face for 3,500 feet, the work ahead of us was apparent. The three glaciated cañons which meet here, with the bold, dark cliffs and pure white floors spotted with pine and tamarack trees, were magnificent, and formed beautiful approaches to the sanctuary where dwelt the ethereal, ghost-like summit peaks which were our goal.

From Onion Valley the snow was practically continuous, and by 10 o'clock the crust was so weak that every few steps it would break, letting us down sometimes waist deep. We were provided with snowshoes, however, and found them very necessary during the remainder of the day. They were impractical on the steep slopes, but luckily the snow was hard here and progress was possible without them.



GILBERT LAKE ON THE KEARSARGE TRAIL, APRIL 9, 1910.



MATLOCK LAKE NEAR ONION VALLEY, JUNE 10, 1909.



UNIVERSITY PEAK FROM THE NORTH, APRIL 9, 1910.

Photographs by Chas. H. Lee.



KEARSARGE PASS IN WINTER, APRIL 9, 1910.



LOOKING SOUTHWARD ALONG THE CREST FROM KEARSARGE PASS.



MRS. AUSTIN'S OLD HOME IN INDEPENDENCE, AFTER A STORM.

Photographs by Chas. H. Lee.

As we ascended, the scene about us became magnificent. The bare north face of University Peak and the wonderful cathedral-like cliffs to the west were set off by the talus cones buried in snow, while in the foreground lay a low timbered ridge, pure white, with the dark green foliage beautifully outlined against it, and at our feet lay an open level area, marking a frozen lake buried with snow. The jagged shadows cast by the cliffs and rocks on the white snow made a very interesting detail on all the north slopes.

An elevation of 11,000 feet was reached after five hours of climbing, and we stopped here for lunch. The thermometer registered 42° in the shade, but the temperature was comfortable when sheltered from the wind. We felt great discomfort from the lack of water, and when a boulder was found with a shallow depression filled with melted snow there was great rejoicing.

The next thousand feet of elevation was a difficult one on account of the steep slope and the soft condition of the snow under the noon-day sun. The mountain side above the Pothole Lake was covered deep with snow, which in some places had a hard crust which made the foothold dangerous, and in others was so soft that we sank almost waist deep at every step. But the Pass was in sight and every step made our success more sure.

At last the summit was reached and the magnificent panorama to the west came into view. It is a grand sight in summer, but as it lay before us in the white covering of winter the scene was wonderful. The floor of the basin above Bullfrog Lake was covered with unbroken snow which extended up to the crest of the talus slope at the base of the Kearsarge Pinnacles, out onto the slopes of Mt. Bago, and well up the mountain-side to the north. The groves of tamarack trees stood out against the white so as to give very interesting detail, and bare oval areas here and there marked the buried lakes. The steep cliffs of the Kearsarge Pinnacles stood out black above the snow, casting long shadows down the

slopes. Off to the southwest Mt. Brewer and the crest of the Kings-Kern Divide stood against the sky-line, and above all were piled up great masses of clouds which hung over the San Joaquin Valley.

The danger of sudden snow-storms is always present in these mountains during the winter, and even as we enjoyed the scene a mass of black clouds was collecting around Mt. Williamson and the peaks southward. We soon commenced the descent, therefore, and reached camp at dark, having spent four hours on the way down. The next day clouds gathered soon after noon, and within half an hour a good snow-storm was in progress, extending down as far as Onion Valley.

The success of this trip shows that there are opportunities of viewing the High Sierra during the winter months with very little expenditure of time and without a very fatiguing trip if the easier routes of approach are selected and snow conditions are favorable for snow-shoes.

SIERRA CLUB BULLETIN.

PUBLISHED JANUARY AND JUNE OF EACH YEAR.

Published for Members.

Annual Dues, \$3.00.

The purposes of the Club are:—"To explore, enjoy, and render accessible the mountain regions of the Pacific Coast; to publish authentic information concerning them; to enlist the support and co-operation of the people and the Government in preserving the forests and other natural features of the Sierra Nevada Mountains."

ORGANIZATION FOR THE YEAR 1910-1911.

Board of Directors.

Mr. JOHN MUIR (Martinez).....	President
Prof. A. G. MCADIE (Merchants Exch. Bldg., S. F.)	Vice-President
Prof. J. N. LE CONTE (Berkeley).....	Treasurer
Mr. WM. E. COLBY (Mills Building, S. F.).....	Secretary
Prof. WILLIAM FREDERIC BADÈ (Berkeley).	
Prof. E. C. FRANKLIN (Stanford University).	
Prof. W. C. MORGAN (Berkeley).	
Mr. EDWARD T. PARSONS (University Club, S. F.).	
Mr. WILLOUGHBY ROOMAN (Los Angeles).	

Honorary Vice-Presidents.

Prof. GEORGE DAVIDSON (San Francisco).
Mr. R. U. JOHNSON (<i>The Century</i> , New York).
Pres. DAVID STARR JORDAN (Stanford University).
Mr. GIFFORD PINCHOT (Washington, D. C.).

Committee on Publications.

Mr. ELLIOTT McALLISTER (Union Trust Bldg., S. F.)....	<i>Editor</i>
Prof. WILLIAM FREDERIC BADÈ (Berkeley).....	<i>Book Reviews</i>
Prof. WM. R. DUDLEY, Mr. F. E. OLMFSTED (U. S. Forest Service)	<i>Forestry Notes</i>
Mr. ALEX. G. ELLIS.	
Mr. J. S. HUTCHINSON, JR.	
Prof. W. C. MORGAN.	
Mr. EDWARD T. PARSONS.	
Prof. H. W. ROLFE (Stanford University).	
Prof. J. E. CHURCH, JR. (Reno, Nevada).	

Auditing Committee.—Directors MCADIE, BADÈ, and FRANKLIN.

Outing Committee.—Mr. WM. E. COLBY (*Chairman*), Mr. J. N. LE CONTE, Mr. EDWARD T. PARSONS.

Committee on Local Walks.—Mr. E. J. MOTT (*Chairman*), Mr. HAROLD FRENCH, Mr. C. W. POHLMANN, Mr. J. E. ROTHER, Mr. GEO. EDWARDS.

Le Conte Memorial Lodge Committee.—Mr. E. T. PARSONS (*Chairman*), Prof. J. N. LE CONTE, Miss LYDIA ATTERBURY.

Librarian—Miss N. TAGGARD.

REPORTS

REPORT OF THE SECRETARY.

MAY 1, 1909, TO MAY 7, 1910.

The year just concluded has been the most prosperous in the history of the Sierra Club. There has been a net increase of 153 members during the year, a number more than 50 greater than the net increase of any previous year. The total membership now numbers 1256. A total of 240 new members joined the Club during the year and 87 were dropped from the list by reason of death, resignation, and non-payment of dues.

The balance remaining in the treasury, as indicated by the treasurer's report, is far greater than any heretofore. This is specially noteworthy when one considers the unusual expenditures of the past year. These consist of a heavy contribution to the building of the Paradise Trail, the purchase of a complete set of the English *Alpine Journal*, and a special election.

Besides the Paradise Trail work the Club has aided in the establishment of the Glacier National Park, in the attempt to create the proposed Estes Park in Colorado, and the proposed Appalachian National Forest, in securing the passage of the bill authorizing government troops to be detailed to protect the Mt. Rainier National Park, and in working to promote the general welfare of the Yosemite National Park.

The Club has received gifts of albums of photographs from several members who accompanied the Club on its 1909 outing. Mr. George Frederick Schwarz has presented the Club with three delightful volumes, of which he is the author, on subjects related to Forestry, and Mr. Walter Henry has donated several very scarce back numbers of the *SIERRA CLUB BULLETIN*. The Club extends its thanks to these generous donors.

Miss Lydia Atterbury has again been appointed custodian of the Le Conte Memorial Lodge in Yosemite Valley. She has given eminent satisfaction in this position. Through Mr. George Fiske the Club Library in the Lodge has been presented with over two hundred volumes that belonged to Galen Clark. It is very fitting that these should belong to this library and remain in the valley available to the public as Mr. Clark wished. It will be remembered that he was custodian of the Club's headquarters in the valley in 1899.

The local walks have attracted more than usual interest this spring. Mr. Ernest J. Mott, Chairman of the Committee on Local

Walks, has been untiring in his efforts to make them attractive to as large a number of members as possible. Excursions to Mts. St. Helena, Diablo and Hamilton were made. A trip to Lake Tahoe is planned for July.

The main outing to King's River Cañon promises to be as fine as any the Club has taken. Members of the party will be able to visit wonderfully beautiful portions of the High Sierra region that have hitherto been very difficult of access.

As each year passes, the importance of the work the Club is engaged in is emphasized and a broader field of usefulness opens before it.

Respectfully submitted,

Wm. E. COLBY, Secretary.

REPORT OF THE TREASURER.

MAY 1, 1909, TO MAY 7, 1910.

TO THE DIRECTORS OF THE SIERRA CLUB.

Gentlemen: I submit the following report of the finances of the Sierra Club for the year ending May 7, 1910:—

GENERAL FUND.

Receipts.

Cash on hand May 1, 1909:

Cash in First National Bank	\$1,669.51
Cash on hand with Secretary	6.57

Cash received from Wm. E. Colby, Secretary—

Dues	\$3,500.67
------------	------------

Advertisements (June, 1909, and January, 1910, BULLETINS	460.00
Rent of Club Room.....	110.00

Sale of BULLETINS	14.75
Sale of Club pins	36.75

Refund of <i>Appalachia</i> postage advanced, and addressing	11.94
Interest from Savings Deposits.....	18.83

Total cash received \$5,789.02

Expenditures.

Publication of BULLETINS Nos. 40 and 41..... \$1,180.18

Salary of regular attendant for twelve months..... 600.00

Rent of Room No. 302, Mills Building..... 360.00

Stamps and stationery for general correspondence..... 379.65

Stamps for mailing BULLETINS 327.00

Carried forward..... \$2,846.83

Brought forward.....	\$2,846.83
Permanent additions to Club Room and Library.....	188.81
Work on trails in Sierra Nevada Mountains	150.00
Advertising expenses	127.50
Le Conte Memorial Lodge expenses	117.15
Public lectures	96.10
Expenses connected with Hetch Hetchy election.....	75.00
Purchase of Club pins	60.45
Register boxes and registers for mountain peaks	57.00
Local walks, advertisements and notices.....	43.50
Extra clerical work	26.40
Running expenses of Club Room	19.25
Express. :	15.65
Miscellaneous small expenses	26.87
Cash advanced to Secretary's drawer	13.32

\$3,863.83

Cash on hand May 7, 1910:

On deposit in First National Bank.....	\$1,693.04
On deposit in Security Savings Bank.....	110.00
On deposit in Savings & Loan Society....	108.83
In Secretary's drawer	13.32

\$1,925.19

Total cash on hand May 7, 1910, exclusive of
permanent fund

\$1,925.19

\$5,789.02

PERMANENT FUND (LIFE MEMBERSHIPS).

On deposit in Security Savings Bank, May 1, 1909.....	\$ 638.30
Interest accumulated during year	24.60
New life memberships during year	100.00

Total on deposit in Security Savings Bank, May 7, 1910.. \$ 762.90

Respectfully submitted,

J. N. LE CONTE, Treasurer.

NOTES AND CORRESPONDENCE

In addition to longer articles suitable for the body of the magazine, the editor would be glad to receive brief memoranda of all noteworthy trips or explorations, together with brief comment and suggestion on any topics of general interest to the Club. Descriptive or narrative articles, or notes concerning the animals, birds, fish, forests, trails, geology, botany, etc., of the mountains, will be acceptable.

The office of the Sierra Club is Room 302 Mills Building, San Francisco, where all Club members are welcome, and where all the maps, photographs, and other records of the Club are kept.

The Club would like to secure additional copies of those numbers of the SIERRA CLUB BULLETIN which are noted on the back of the cover of this number as being out of print, and we hope any member having extra copies will send them to the Secretary.

MOUNT RAINIER NATIONAL PARK.

The bill to prevent trespassers or intruders from entering the Mount Rainier National Park, in the State of Washington, has been passed and is as follows:

Be it enacted, etc., That the Secretary of War, upon the request of the Secretary of the Interior, is hereby authorized and directed to make the necessary detail of troops to prevent trespassers or intruders from entering the Mount Rainier National Park, in Washington, for the purpose of destroying the game or objects of curiosity therein, or for any other purpose prohibited by law or regulation for the government of said reservation, and to remove such persons from said park if found therein.

YOSEMITE, CAL., May 13, 1910.

MR. W. E. COLBY,

Dear Sir:—Mr. Clark expressed a wish that his books should be put in some place where people could have access to them, and as I know of no better place, ask if the Lodge will accept them and is willing to furnish a case so they will be protected and safe. There are about 300 books. Will you please let me know if agreeable and how soon they can be taken there, as I am anxious to get them out of the house, so as to turn it over to the Superintendent.

Yours truly,

(Signed) GEO. FISKE.

Editor's Note.—This gift has been accepted by the Club and the books will be placed in the Le Conte Memorial Lodge Library, where they will be available to the visiting public for reference.

A MAGNIFICENT GIFT.

Mrs. E. H. Harriman has given to the State of New York a tract of ten thousand acres of land and one million dollars cash for its improvement. And this magnificent gift, it is said, is accompanied by another of \$1,625,000 from seventeen patriotic men and women of New York City to be used in purchasing adjoining land. "The intention," says William Elroy Curtis, in the *Annals of the American Academy of Political and Social Science*, "is to make a park sixty miles long, varying from twelve hundred feet to twelve miles wide, upon the rim of the Palisades and along the west bank of the Hudson River from the boundary line of New Jersey to the city of Newburg, above West Point. It is understood also that the family of the late Abram S. Hewitt intend to make a similar gift of eight or ten thousand acres south of the boundary to the State of New Jersey, provided the legislature of that State makes an appropriation for its care and improvement. When this scheme is completed it will be in several respects the most notable playground in the world, embracing a total area of 45,000 acres along the bank of a great thoroughfare and immediately accessible to three or four million people."

J. M.

SAN FRANCISCO, May 25, 1910.

MR. WILLIAM E. COLBY,

Secretary, Sierra Club, San Francisco, Cal.

DEAR MR. COLBY:—I received to-day a telegram from Mr. G. F. Marsh, of Lone Pine, saying that he climbed Mount Whitney and reached the summit yesterday and found our instruments left there last August all right. He gives the lowest temperature on the top of the United States proper last winter as 23° below zero and the highest, 57°. There is very little snow in the mountains; about the same amount now as on the first of July last year. It is quite an achievement to reach the summit so early in the year.

There is an interesting sequence connected with this question of getting the temperature on the top of the Sierra. You may remember that Professor Le Conte and other members of the Sierra Club left thermometers on Mount Lyell in the summer of 1898 and we obtained a record of—17° as the lowest. Subsequently we tried to get the instruments to the summit of Whitney and the outcome of it was that Prof. J. E. Church, Jr., established an observatory on Mount Rose. Last year, as you know, through the aid of the Smithsonian Institution, a small building was built on Mount Whitney. Do we not seem to be making progress in the conquest of the Sierra?

Sincerely,

ALEXANDER G. MCADIE,
Professor.

RAINBOW BRIDGE IN UTAH TO BE NATIONAL MONUMENT.

WASHINGTON, June 3.—President Taft to-day, upon recommendation of the Secretary of the Interior, issued a proclamation creating Rainbow Bridge, a natural wonder within the Navajo Indian reservation, near the southern boundary of Utah, a national monument. Under the provisions of the national monument act, 160 acres of land surrounding the bridge are reserved for its protection.

For further information concerning the great natural bridges of Utah, see article by Byron Cummings in the *National Geographic Magazine* for February, 1910.

THE ALTITUDE OF MOUNT HUASCARAN.

In 1908 Miss A. Peck, of U. S. A., claimed to have ascended the north, lower summit of Mt. Huascaran in Peru. She made no instrumental observations above what she considers to be an altitude of 5,975 metres (19,600 feet), but, from eye-estimates only, asserted that this peak had a height of at least 7,317 metres (24,000 feet), and was thus the highest mountain of South America.

Believing Aconcagua to be the highest Andean peak, and furthermore to test the truth of these assertions, I decided to have a careful detailed triangulation made of the two summits of Mt. Huascaran. Through the assistance of Messrs. Fr. Schrader and Henri Vallot, acting for the Société Générale d'Etudes et de Travaux Topographiques of Paris, an expedition was sent to Peru for me under the direction of M. de Larminat to effect this purpose.

Assisted by the Peruvian Government and favorable weather, M. de Larminat and his assistants were able to carry out this work successfully between August and November, 1909.

A base, 1,600 metres (5,248 feet) long was measured in the Rio Santa Valley in the Black Cordillera at an altitude of 3,800 metres (12,464 feet). This base was measured by means of a 50 metre (164 feet) tape of Invar metal. From two stations, one at either end of this base, and from two others, the positions and altitudes of which were determined by trigonometrical measurements from them, that is from four stations in all, the positions and relative altitudes of the two summits of Huascaran were fixed by azimuthal and zenithal angles taken by theodolite.

In order to ascertain the true height of these stations above average sea-level a progressive leveling was conducted from the highest station, called the Garganta Signal down along the mule-

path leading from Yungay by way of Quillo to the sea at the port of Casma.

The Garganta Signal is higher than the col where the path between Yungay and Casma reaches its highest point. The difference in height between these two was ascertained by triangulation from the Garganta Signal to be 159 metres (521.5 feet). From the col down to sea-level at the port of Casma the leveling was performed by means of the tacheometer. The altitude of the Garganta Signal being thus established, it was an easy matter to fix the altitude of the other three stations, from which the triangulation of the summits was made.

From two of these stations from which it was visible, the altitude of the church tower at Yungay was also established at 2,568 metres (8,432 feet).

The average sea-level was determined by four double observations of two water-marks made at intervals of six hours, ten minutes between each. The agreement of these was satisfactory owing to the small amplitude of the tide at Casma, and also to the fortunate circumstance, that the observations were made at time of neap tide.

The results of these measurements show the height of the north peak of Huascaran to be 6,650 metres (21,812 feet), and the height of the south peak 6,763 metres (22,182 feet).

FANNY BULLOCK WORKMAN.

February 15, 1910.

DR. LONGSTAFF'S EXPEDITION TO THE KARAKORAM.

Dr. Longstaff has now returned from his expedition to the unexplored regions of the Karakoram, north of Kashmir. The Karakoram range has always been shown upon maps as a great, unbroken wall stretching eastwards from the peak of K^a (28,250 feet), and forming the water-parting between the Indian and the Central Asian systems of drainage. For a hundred miles east of K^a there is no pass over this range known to the natives, and when Dr. Longstaff set out to explore the region last spring his aim was to cross the Karakoram range by a pass named the Saltoro, the existence of which was based upon tradition only, and the position of which was doubtful.

In June last Dr. Longstaff discovered the old Saltoro pass (18,200 feet), and crossed the Karakoram range with Dr. Neve and Mr. Slingsby. On the further side of the range the party came upon an immense glacier, which they judged from the maps to be flowing northwards and to belong to the drainage system of Central Asia. On exploring the glacier, however, Dr. Longstaff was astonished to find that it was flowing to the south, and

he eventually discovered that it was piercing the main Karakoram range by an unknown gorge and that it was in fact an important feeder of the Indus. This discovery shows that the upper basin of the Indus is not limited, as has been supposed, by the Karakoram range. The newly discovered glacier is about forty-eight miles long, ten miles longer than the Biafo, which has hitherto been regarded as the largest glacier of the Himalaya-Karakoram mountains. The perpetual solitude of these high glacial valleys is brought home to us when we reflect that the greatest glacier outside polar regions had not been seen by living man till Dr. Longstaff's party reached it, and that though it has been for centuries one of the main sources of our river Indus, it has been unknown to geography till 1909.

Dr. Longstaff took clinometers with him, and he has measured many new altitudes. He discovered an immense chain of mountains to be standing north of his new glacier—a chain that is not shown upon any map.

The highest peak of the new chain was observed by Dr. Longstaff from three different places, and its height appears to be between 27,500 and 28,000 feet. This height is only surpassed by four known peaks. No mountain exceeding 27,000 feet in altitude has been discovered since 1858, and the elevations of the only mountains hitherto found to surpass 27,000 feet were all brought to light by the scientific operations of the Great Trigonometrical Survey. Dr. Longstaff has named the newly discovered peak Teram-Kangri.—*Alpine Journal for February, 1910.*

THE DUKE OF THE ABRUZZI IN THE HIMALAYAS.

In recent addresses to the Alpine Club at Turin, and to the Royal Geographic Society of Rome, the Duke of the Abruzzi spoke on his Himalayan explorations of 1909. May and June were passed in unsuccessful efforts to ascend the huge pyramidal mountain known as K^a. From the base camp at Rdokass, near the center of the Baltero glacier, an advance bivouac was made at the foot of the southern wall of K^a. Unavailing efforts were made to locate practicable trails on the east and west sides, but everywhere were either very steep ridges of loose, broken rock or sheer precipices and impassable glaciers.

However, the Duke attempted an ascent up the east-southeast ridge, where the conditions were so difficult and dangerous as to cause him to turn back at an altitude of about 16,000 feet. A second unsuccessful attempt was made on the west flank. The upper basin of the Austen-Goodwin glacier was surveyed, and the Duke was enabled to get views of the north side of K^a and of the hitherto unknown district to the east.

In July efforts were made to ascend Brides Peak, on whose flank a base camp was established on the Chogolisa saddle.

The Duke passed three weeks at an altitude exceeding 21,000 feet, and made two attempts under conditions of great discomfort and considerable danger, owing to the monsoon weather, which brought heavy snow and dense clouds. Reaching 24,000 feet in one attempt, he attained on his second definite climb, on July 18th, with two guides, the record height on Brides Peak of 24,583 feet. The ridges were dangerous and difficult, while further progress was barred by a dense fog, which enveloped the party about 500 feet below the summit, which is 25,119 feet.

This unsurpassed height of 24,583 feet supplants the previous world record of 24,000 feet on Mount Kabru, attained by Norwegian mountaineers in 1908.

The Duke supplemented his strictly mountaineering feats by extended surveys, hypsometrical observations, meteorological records, and other scientific data of value and interest. His work is entitled to the highest possible recognition from geographers of all nations.—*The National Geographic Magazine, March, 1910.*

PLANTING GOLDEN TROUT IN GARDNER CREEK AND KINGS RIVER WATERS.

An expedition to secure golden trout from Volcano Creek, Mt. Whitney, for planting in Gardner Creek and Kings River waters, left Lone Pine September 17, 1909, under the supervision of Fish Commissioner Ober. The party consisted of Geo. Hall and S. G. McMurray of Big Pine, and H. J. Bell of Bishop, together with packer and guide.

The waters of the creek were turned at the same point at which the Sierra Club obtained its trout the year previous, on the 20th, and part of the 1500 trout secured, the balance being caught the following day. The trout, ranging in size from one to three and one-half inches, were placed in ten 10-gallon milk cans and packed two cans to the animal. The party camped on the return trip at Portuguese Meadows the night of the 21st, and arrived at Lone Pine on the 22nd.

At Lone Pine the expedition was subdivided, Mr. Hall and Mr. McMurray proceeding by pack with one-half of the fish to Independence. From this point they followed the wagon road to the old Kearsarge Mine, thence by trail over Kearsarge Pass, an altitude of 11,623 feet, and around Bullfrog Lake; continued to Charlotte Lake and from there north to Gardner Creek.

Parts of the trail were very steep and at times almost undiscernible, yet the trip of eighty-five miles was made with a loss of less than ten per cent of the fish.



ONE OF THE LAKES ON GARDNER CREEK WHERE THE TROUT WERE PLANTED.



GOLDEN "TROUT" (FORMERLY VOLCANO) CREEK WHERE THE TROUT WERE TAKEN.

Photographs furnished by courtesy of A. A. Forbes.



BELOW GROUSE MEADOWS—LOOKING DOWN MIDDLE FORK OF KING'S RIVER.

From photograph by A. A. Forbes.

The head of Gardner Creek and five different lakes, in area from twenty to fifty acres each, were stocked with the trout. These waters are about five miles northwest of Rae Lake, Gardner Creek being tributary to the South Fork of Kings River and emptying into the river over precipitous cliffs.

Mr. Bell accompanied the other half of the fish by rail from Mt. Whitney station, five miles from Lone Pine, to Laws, sixty-five miles up the Valley. At Laws he was met with a four-horse stage and driven to the South Fork of Bishop Creek, a distance of twenty-eight miles, and an ascent of 6,000 feet.

Mr. Bell was joined at South Fork by A. A. Forbes, photographer, and Ira Hume, both of Bishop. The party started on the morning of the 23d for the summit and the Middle Fork of Kings River, the fish being packed on mules which, together with the packer, were in waiting.

The ascent to the summit was perilous to the men, the animals and the fish. After traveling about two miles, the trail became almost obliterated, in places the only guide being markings made by Rambeau Bros., sheepmen, over twenty years ago. They realized the difficulty of blazing the trail in the usual way by placing small stones on a larger one, as the snow slides often deposited stones of a similar size, and laid willow sticks pointing in the direction of the trail between the small stones. Credit for the safety of the outfit over this part of the trail is due to Mr. H. J. Bell who, as Forest Ranger, had crossed the summit every summer for the past eight years.

The first serious difficulty was encountered when the outfit was forced out of the trail on account of the snow and obliged to make its way among stones ranging in size from a man's head to boulders as large as a house. This snow field was so precipitous that it was necessary to build a trail through these stones for half a mile before a place could be found where the animals could climb upon it.

The party traveled over this snow field, which was practically a sheet of ice, for a quarter of a mile before reaching the summit, the animals not being allowed to halt for fear of losing their footing.

After crossing this pass, the summit, an altitude of over 12,000 feet, and which consisted of a small mesa, was reached at noon.

The first planting of thirty fish was made in North Palisade Lake, about half way down the cañon. The trail from this lake followed the left side of Dusy Creek to the first falls, crossed at a little flat, and continued on the right bank around the second falls.

Danger was again encountered in descending this cañon, the trail between the rocks being so narrow that there was barely

space for the animals with their packs to pass through. For twenty feet the descent was so steep and curved that it was necessary to shoot the animals down one at a time and risk their safe arrival at the bottom.

The second planting of two hundred fish was made in the Middle Fork of Kings River at Langue Meadows the evening of the 23d, and the party, worn and tired, camped in the shade of Langue Peak.

The morning of the 24th they traveled down the river to Grouse Meadows and planted the balance of the trout in two different places, the water through the Meadows being about three feet deep and fifteen to twenty feet wide for a quarter of a mile. The entire distance covered by this expedition was one hundred and fifty miles, and the loss of fish but fifty in number.

The small loss of the fish in both expeditions was due to the movement of the cans en route, which furnished oxygen sufficient to preserve the life of the fish, and to the care taken in placing the cans in water wherever a halt was made, with the mouth of the can, over which a barley sack had been drawn, up stream. The temperature of the water containing the fish was changed to that of the stream by gradually pouring water from the stream into the cans.

These transplantings were made to ascertain definitely if the golden trout is a distinct species, or whether the golden color is due to a reddish deposit found a few inches below the beds of the Mt. Whitney creeks.

The waters of Gardner Creek and Kings River, in which these trout were placed, are free from fish and the bottoms are covered with a white granite sand; also, these streams are fed by melting snows, while the waters of the Mt. Whitney streams are supplied from subterranean sources. Should the trout retain their golden hue in the changed environments, all question of a distinct specie will be removed. These expeditions were financed by a few citizens of Independence and Bishop, and all services, with the exception of packers and guides, were furnished free of charge.

The Kings River party spent a day hunting in Grouse Meadows, and then hurried homeward for fear that a threatened snow storm would obliterate the trail, thereby making the removal of the pack animals from Grouse Meadows impossible until spring, and the return of the men very hazardous. So great was the anxiety that no camp was made until they arrived at Slim Lake, on the far side of the summit, at 10 P. M.

A. A. FORBES,
MARY R. FORBES.

STATE TO PLANT TROUT IN HIGHER ALTITUDES OF THE SIERRA.

District State Deputy Game Warden A. D. Ferguson has a fish story to tell that will interest every trout angler in Fresno and adjoining counties. It is that the State Game and Fish Commission has made the money allowance for the work, has authorized him to proceed and that he has perfected arrangements for a summer's activities in the planting of fish in the mountain originating streams of Fresno and nearby counties. In the prosecution of this work, he will have four mule pack trains ascending to headwaters of streams and also the land-locked lakes in the high Sierra.

On the 10th of next month, reports Ferguson, he will receive by the State's fish car from the hatchery at Sisson a first consignment of 100,000 Loch Leven trout for distribution in the high Sierra.

The Loch Leven is a gamey trout which was originally transplanted from Scotland, and the reason of its choice for distribution here by the commission is that it has been proven by experiment to be the only trout that will spawn in a lake that is without a water inlet. There are many such sheets of water in the higher altitudes fed only by the melting snows of the Sierra.

These Loch Levens will be transported to Markwood Meadows by pack train to be distributed in the lakes that feed the branches of the south fork of the San Joaquin River, Dinkey Creek, the north fork of the Kings, the Dinkey Lakes, Coyote Creek, and numerous other, smaller and nameless lakes yet considerably sized sheets of water fed by the eternal snows.

About three weeks later will be received a consignment of as many young Loch Leven trout to be taken off the car at Lemon Cove and to be likewise transported to the ridge above Hume in stages by pack train and liberated for self-propagation in the lakes that feed the south fork of the Kings River and the Kaweah River in Tulare County.

Simultaneously also will be continued the work with the native fish in taking them out of streams where they abound, removing them by pack train and placing them in streams which at present are barren of fish. The usual custom followed in this process is to turn a small branch of the stream carrying trout into pot holes, netting the fish out of these and transporting them in transplanting cans. All this laborious mountain transportation must necessarily be done by mule pack train because faint trails and mountain ascents must be followed and overcome where none but the plodding cautiousness of the mule or burro can be absolutely depended upon.

For this transportation of little fish a special design of cans is employed, oblong in shape and each holding about ten gallons

of water and fish, one hanging on either side of the pack saddle of mule, donkey or burro. The cans are of galvanized iron reinforced with hardwood strips to stand the wear and tear and hard knocks that they are subjected to on one of these mountainering jaunts, where as before said, the trails are so narrow and precipitous that the cans frequently scrape along the rocky mountain side. In this manner fish may be transported over long distances for days at a time without trouble or even appreciable loss. The cans are provided with screen tops so that they may be submerged over night in a nearby stream and the fish given fresh water of a temperature such as it is accustomed, and likely to live in when finally liberated to work out its own salvation.

While three and four pack trains will thus be engaged in the busy summer's work, the intention is to distribute the young fish in such widely separated regions as to stock eventually every stream suitable for trout in Fresno, Tulare, and a part of Madera counties.

Besides the above work, Deputy Warden Ellis has with the special approval of the United States Bureau of Fisheries been authorized to work in the Kern River region and plant fish in the streams flowing from the east into the big Kern River. For this work he will have three species of golden trout to distribute, the agua bonita in the south fork, the Roosevelti in Volcano Creek and the whitei in Soda Creek, also stocking streams flowing from the west into the Big Kern with so-called Kern River trout.

Yet another commission has been entrusted to Deputy Fish Commissioner Ober in Inyo with the co-operation of stockmen to plant fish in the headwaters of the Kings in the rougher and more inaccessible mountain regions yet more approachable from the Inyo County side than from Fresno. This work will make use of the fourth pack train. The third will ascend to the middle and south forks of the Kings and the fourth will distribute fish in the north fork of the Kings and south fork of the San Joaquin sections.

"It is the intention," said Warden Ferguson, "to bring trout from Rock Creek on the Mono side to stock the waters in the neighborhood of Mount Goddard on this side of the Sierra, and complete a work which I undertook in 1897, when I took fish out of Rock Creek to stock waters across the summit to the Mono, a tributary of the south fork of the Kings, a work in fish transplanting which has exceeded the fondest expectations, for the fish have thriven and multiplied. The Rock Creek trout is a beautifully marked specimen of the brook trout. Its stock was originally from Colorado, imported probably twenty-eight years ago.



LANGUE PEAK—MIDDLE FORK OF KING'S RIVER.

From photograph by A. A. Forbes.



SIERRA CLUB CATCHING GOLDEN TROUT FOR TRANSPLANTING, GOLDEN TROUT CREEK, KERN RIVER, 1908.

From photograph by Glenn L. Allen.

"I may add that it is the purpose in connection with this summer's fish planting work in the high Sierra to keep a careful record of the present fish plantings and to secure data of previous plantings with a view to have authoritative references for the future as to the varieties of fish, their origin and where to be found in the streams whose fountain heads are in the Sierras, these data to be recorded not only in the publications of the California Fish Commission, but also in the bulletins of the United States Fisheries Bureau."

In this connection Warden Ferguson stated further that as the result of the summer's fish campaign and allowing the fish three or four years' time to multiply a work will be accomplished that was started in 1891, and that in regions with no previous plantings, save then with the assistance of stockmen, upwards of 100 streams and lakes will be stocked that have previously been barren of fish life.

"A glance at the map will show," said he, "that the headwaters of the San Joaquin and the Kings have their rise almost wholly in Fresno, and naturally there are 100 or more tributary streams that will make perfect trout waters and make the mountains in the San Joaquin Valley a paradise for the fishermen. The plan incidentally involves the keeping of the varieties separate and as far as possible to plant the streams to particular varieties.

"It has been demonstrated that trout planted in new waters thrive amazingly well and grow to greater size than in the streams that have known them for generations. The mere fact that no streams in the high mountains have been found in which they are in their native state is not an indication that the transplanted fish will not thrive there. The barrenness of these streams in the high altitudes is readily accounted for on the very plausible theory that coming from high plateaus these streams have high falls which preclude the fish ascending from the main streams to spawn. Where the fish have been planted above such falls, they have thriven and propogated in great number, and the prediction is a safe one that in about three years hence these now barren mountain streams will be plentifully stocked with trout.

"The example of this is furnished right here in Fresno County. Originally there were three streams not frequented by trout, the south and middle forks of the Kings, and Fish Creek, near the border line of Madera. Due to the first fish-planting work in 1897, splendid trout fishing may to-day be had in Roaring River, Crown Valley Creek, Pitman, Ranchiera, Tamarack, Big Creek, the south fork of the San Joaquin, and a score of other smaller streams as well as lakes."—*Fresno Republican*, May 31, 1910.

CAMPING OUT IN THE MOUNTAINS.

Comparatively few Californians have much acquaintance with the mountain regions of the State, save those who live in them. This is true of even most of the oldest residents. A large proportion of the adult inhabitants scarcely have been in the mountains at all. And merely to cross the Sierra Nevada by rail gives little idea of the majesty and beauty of the great range. Railroads of necessity seek the lowest grades, which in the Sierra are found in cañons hemmed in by walls of rock that obscure nearly all views save those of the depths from which they rise and the heights to which they ascend. And on the line of the Central Pacific snowsheds prevent the traveler from seeing much of the finest scenery in that part of the Sierra traversed by the road.

If, however, one could get an unobstructed and leisurely view along every mile of railroad passing through the mountains of California he would still be far from knowing them. The railroads are few and the mountains are many. By far the larger part of the area of the State is mountainous, the Sierra Nevada as well as the Coast Range extending from end to end of California, through ten degrees of latitude, and connecting at each extremity with transverse ranges of lofty altitude and much interest.

Furthermore, the railroads, with the exception of a few new lines, penetrate the mountains where lumbering has stripped them of much of their original beauty, and left unsightly, bare, rocky slopes where Nature had provided forests as far as the eye could see.

Mining, likewise, has marred the aspect of the mountains along many miles of railroads, while fire and grazing have done much more to lessen or destroy the native charm of the much traveled ways.

So to see the mountains as Nature made them, in all their glory of primitive forest, with their streams running clear and their flanks ungashed by the work of miners, one must leave the familiar lines of travel and penetrate where the whistle of the locomotive has never been heard. And to do this in the best way, so as to learn most about the mountains and gain an abiding love for them, the visitor should go afoot, on horseback or by wagon, and dwell among them, living entirely in the open, by night as well as by day.

The walker sees most and enjoys most, if well and strong enough for the exertion required. And even for persons not strong, unless disease forbids such exercise, a few miles of leisurely walking in the high Sierra, from day to day, result in rapid increase of health and vigor. It is, indeed, surprising how

much walking and climbing may be accomplished in the mountains by persons accustomed to indoor living when at home. When the feet get hardened, and the muscles recover from their first unwanted strain and fatigue, there is commonly a speedy gain in strength and endurance.

In the dry summers of California tents are not required for sleeping out of doors, even in the high mountain regions, where the nights and early mornings are chilly. A snug sleeping-bag, or a pair of heavy blankets, affords all the warmth and covering needed. Possible showers may be avoided by the shelter of trees, or by providing a rubber blanket or sheet of oilcloth for a covering in such contingencies.

The beneficial effects of sleeping in the open air cannot well be overrated, especially in the mountains, where mosquitoes and other insect pests are ordinarily escaped. But near mountain meadows, even in the high Sierra, mosquitoes are sometimes troublesome, and it is well for campers to be provided with suitable netting.

The campers and trampers are those who get most profit and delight from a stay in the mountains of California. Theirs is the simple life, under the most favorable conditions for health, recreation, and enjoyment, provided the company be congenial and suitable provision be made for the comfort of all.

This leads up to the suggestion that there should be numerous clubs in this State to promote and facilitate mountaineering, and to conserve, as well as make more accessible, the chief beauty spots and greatest natural attractions of the mountains. One such organization exists under the name of the Sierra Club, with headquarters in San Francisco, which has upwards of 1,250 members, representing all parts of the State. Its primary object was the conservation of forests, streams, and other charms of the mountains, but for years past an Outing section of the Club, limited to about 150 men and women, has enjoyed an annual camping trip in California or elsewhere on the Pacific Coast. Last year the camp was in the Yosemite and the Tuolumne Meadows, and this season the King's River region, south of the Yosemite, is the chosen field.

The manner in which these Outings are held illustrates the advantage of forming a club for such purposes. Not only are the expenses in this way much lessened, but there is also a great gain in comfort and convenience, compared with camping in a small way, by a family or a few persons only. Good cooks are employed by the Sierra Club, who are experienced in camp needs, and a club committee, familiar with all the requirements, provides the food, arranges for special excursion rates by rail or stage, hires a pack-train for use in the mountains, selects camp-

ing grounds, and looks after all other arrangements. The other members of the Outing section have nothing to do but walk, eat, sleep, and enjoy themselves to their hearts' content, free from all the work and bother that attends camping where the party is small.

There are certain other advantages in numbers. Everyone may find suitable or congenial company, and at night, when all are gathered about the camp-fire, there may be good singing, instrumental music, story-telling or interesting "talks" on various subjects by professional or other persons capable of giving special information or relating entertaining personal experiences. The camp-fire every evening is one of the most enjoyable features of the Sierra Club Outings. A "talk" by John Muir, its venerable President, is a great delight as well as highly instructive.

Each member of a Sierra Club Outing provides his own bedding, and packs his belongings in a canvas "dunnage" bag, which is strictly limited in weight when turned over to the pack-train, as transportation by mule-back in the mountains is very costly. But the pack-train relieves the party from the heavy toil of carrying blankets, food, and other necessaries in the mountain solitudes, where wagon-roads are left behind and trails often become steep and difficult, even for walkers who bear no burden.

To camp in the Sierra Nevada under such conditions, free from labor and care, and with every hour of the long day available for walking, climbing, fishing, botanizing, study of trees, birds, insects, rocks or other objects, or for social enjoyment, or mere idling and sight-seeing, is to experience the sum of earthly enjoyment out of doors, if the camper be in tune with Nature and of a disposition to appreciate and enjoy the blessings that surround him.—*Wm. A. Lawson, in the Sacramento Bee.*

HETCH HETCHY HEARING.

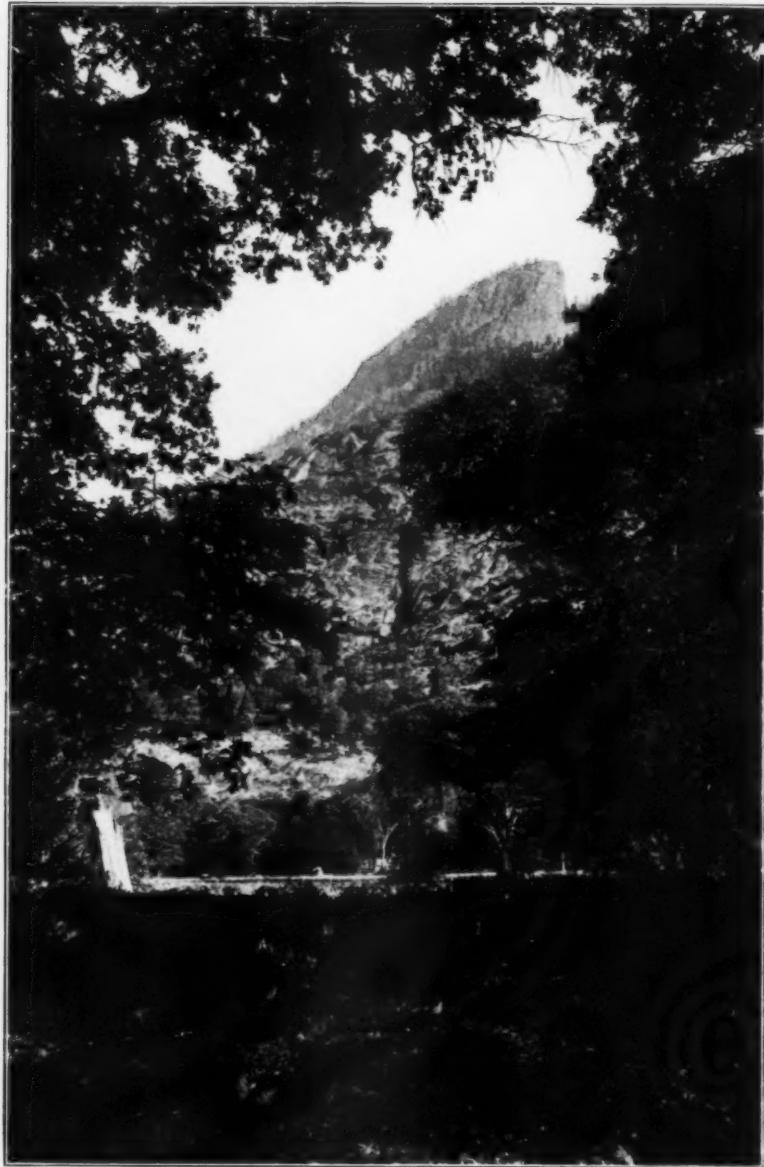
(Order—In the matter of the permit of May 11, 1908, to San Francisco, relating to the Hetch Hetchy Valley.)

In the matter of the order directed by the Secretary of the Interior to the Mayor and Supervisors of the City and County of San Francisco, State of California, on February 25, 1910, to show cause why the Hetch Hetchy Valley and reservoir site should not be eliminated from the permit to said city of date May 11, 1908;

The above entitled matter having come on regularly to be heard on the 25th day of May, 1910, at the hour of 10 o'clock A. M., and said City and County of San Francisco, having, through its representatives, applied for a continuance of said hearing and for



"HETCH-HETCHY VALLEY IS A GRAND LANDSCAPE GARDEN, ONE OF NATURE'S RAREST AND MOST PRECIOUS MOUNTAIN MANSIONS, AS IN YOSEMITE, THE SUBLIME ROCKS OF ITS WALLS GLOW WITH LIFE, WHETHER LEANING BACK IN REPOSE OR STANDING ERECT IN THOROUGHFAUL ATTITUDES GIVING WELCOME TO STORMS AND CALMS ALIKE."—JOHN MUIR.
From photograph by Herbert W. Gleeson.



VIEW IN UPPER END OF HETCH HETCHY VALLEY.

"IT WAS A GARDEN OF PARADISE, THIS VALLEY; A LESSER YOSEMITE, BUT VERY DIFFERENT, WITH AN INFINITELY CHARMING INDIVIDUALITY OF ITS OWN; SMALLER BUT MORE COMPACT, LESS GRAND BUT NOT LESS BEAUTIFUL. IN ITS WONDERFUL FOREST GROWTH OF GREAT VARIETY AND MAGNIFICENT DEVELOPMENT IT SURPASSES THE YOSEMITE VALLEY ITSELF."—*Harriet Monroe.*

From photograph by J. N. Le Conte.

further time within which to more fully respond to said order, said application being made upon the ground that sufficient data was not available upon which to make showing responsive to said order, and an adjournment to Thursday morning, May 26, at 10 o'clock A. M., having been taken to permit the advisory Board of Army Engineers to confer with the engineers representing the several parties interested herein respecting said application and the propriety of granting the same, whereupon the matter of said application for continuance and postponement having been duly and fully considered by the Secretary of the Interior and said advisory board of army engineers, said board having recommended the same in writing.

It is hereby ordered that said City and County of San Francisco be, and is hereby, granted to and including the first day of June, 1911, within which to respond to said order, to show cause, and that hearing upon said order be, and it is hereby, continued until the hour of 10 o'clock A. M. on said last-mentioned date.

Said continuance and postponement is granted for the purpose of enabling said City and County of San Francisco to furnish necessary data and information to enable the Department of the Interior to determine whether or not the Lake Eleanor Basin and the watershed contributary, or which may be made contributary, thereto, together with all other sources of water supply available to said city, will be adequate for all present and reasonably prospective need of said City of San Francisco and adjacent bay cities without the inclusion of the Hetch Hetchy Valley as a part of said sources of supply, and whether it is necessary to include said Hetch Hetchy Valley as a source of municipal water supply for said City and County of San Francisco, and bay cities.

In granting said postponement and continuance it is understood said City and County of San Francisco will at once proceed, at its own expense, and with due diligence, to secure and furnish to said advisory board of army engineers all necessary data upon which to make the determination aforesaid, and pending the hearing upon said order to show cause no attempt shall be made by said city or any of its officers or agents to acquire, as against the United States, any other or different rights to the Hetch Hetchy Valley than it now has under said permit, and that no efforts shall be made by said city to develop said Hetch Hetchy Valley site.

Said advisory board of army engineers is hereby authorized to procure such independent data and information as it may deem necessary or proper to a full and complete determination of the matters committed to said board and the Secretary of

the Interior for determination and that said board may call upon the Geological Survey or other bureaus of the Department of the Interior for such assistance as any such bureau may be able to render in the premises.

It is further understood that said city will, as soon as practicable, submit to said advisory board a full exhibition of its proposed plan of development and utilization of water under said permit, together with estimates of the cost thereof, and also a full statement of all outstanding water-rights, both for irrigation, power, and other uses, on the Tuolumne River and Lake Eleanor Basins and the proposed method of providing for the protection thereof.

All questions as to the validity and legality of said permit of date May 11, 1908, are hereby expressly reserved for decision and determination until said final hearing.

Dated this 27th day of May, 1910.

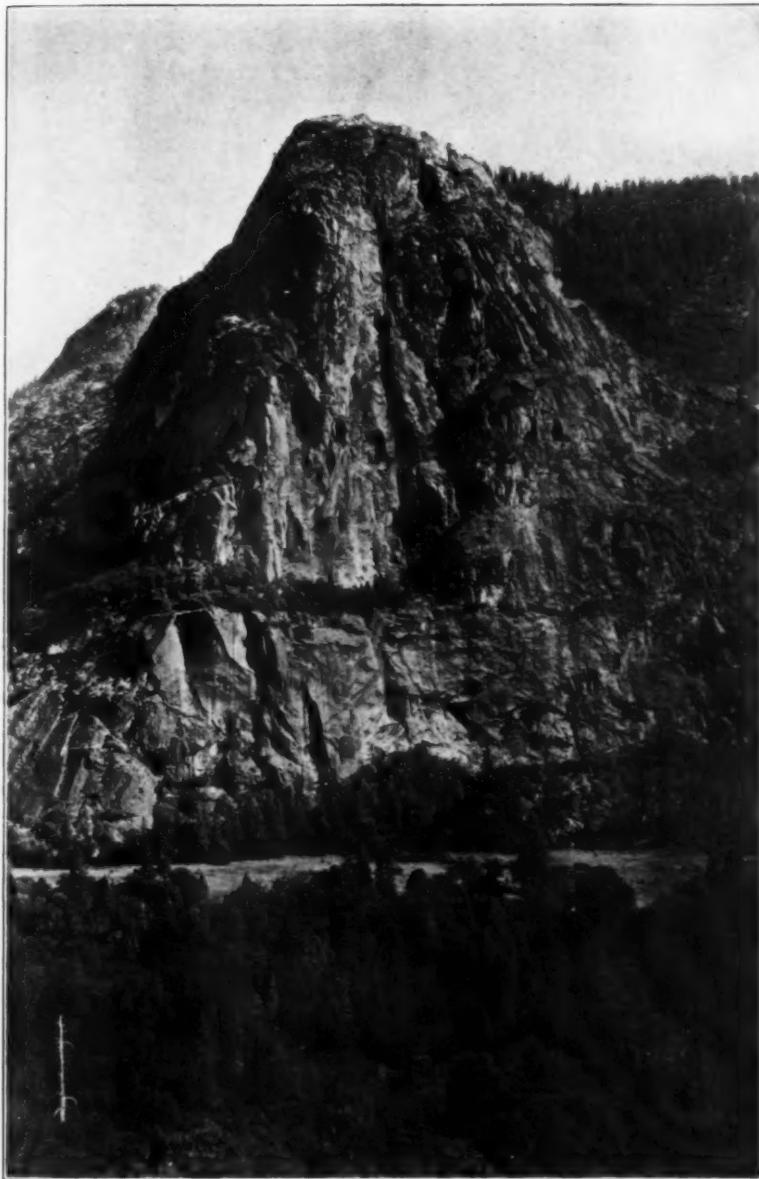
R. A. BALLINGER,
Secretary of the Interior.

In connection with the foregoing order, Secretary Ballinger is reported as having made the following remarks at the hearing: "I have had, gentlemen, a rough report made to me (I say rough—it has not yet been thoroughly finished by the board of army engineers, although they have communicated to me the substance of their report), pursuant to the adjournment taken yesterday on their conference with the engineers representing the various parties.

"The substance of the report is that they believe and so advise me as secretary of the interior, that it will be necessary, in order to secure such data as will allow them to advise intelligently this department on the sources of water supply necessary for the present and prospective needs of San Francisco and the bay cities if the Hetch Hetchy Valley be eliminated, to have detailed investigation and inquiry into the conditions of watersheds and the like.

"In pursuance of that report, I feel it my duty to make an order continuing this matter for further investigation, in order that the department may be equipped with all necessary information to make a final and proper disposition of this question.

"The authorities of San Francisco should present to this advisory army board, from time to time, the data that they acquire, so that the army board may know the progress that is being made, and also should outline to this board the scope and plan of the investigation which the city proposes to make, so that the board can proceed in its way with a perfectly intelligent view of what is going to be done, and the general details of the



"THE MOST STRIKINGLY PICTURESQUE ROCK IN HETCH-HETCHY VALLEY IS A MAJESTIC PYRAMID OVER 2,000 FEET IN HEIGHT WHICH IS CALLED BY THE INDIANS 'KOLANA.' IT IS THE OUTERMOST OF A GROUP LIKE THE CATHEDRAL ROCKS OF YOSEMITE AND OCCUPIES THE SAME RELATIVE POSITION ON THE SOUTH WALL."—John Muir.

From photograph by Herbert W. Gleason.



WAPAMA OR HETCH HETCHY FALL.

"IT IS THE COUNTERPART OF THE YOSEMITE FALL, BUT HAS A MUCH GREATER VOLUME OF WATER, IS ABOUT 1,700 FEET IN HEIGHT, AND APPEARS TO BE NEARLY VERTICAL THOUGH CONSIDERABLY INCLINED, AND IS DASHED INTO HUGE OUTBOUNDING BOSSES OF FOAM ON THE PROJECTING SHELVES AND KNOBS OF ITS JAGGED GORGE."—*John Muir*. From photograph by Herbert W Gleason.

methods of development proposed in the Hetch Hetchy Valley should also be reported to the board.

"I want to know what is necessary so far as the Hetch Hetchy Valley is concerned. The thing which this government wants to know, and the American people want to know, is whether it is a matter of absolute necessity for the people of that city to have this source of water supply; otherwise it belongs to the people for the purpose for which it has been set aside."

EDITORIAL NOTE.—The members of the federal commission mentioned in the order and appointed by the President are Colonel Spencer Cosby, Lieutenant Colonel John Biddle and Lieutenant Colonel Harry Taylor, all being army engineers of the highest standing and of unquestioned ability. This is a happy outcome of the matter since the public will now have an opportunity of being informed as to the facts underlying the water supply situation. Every one will await the report of this board with great interest and this vexed question bids fair to be put at rest for all time.

It is reported that Congress has appropriated \$12,000 to defray the expenses of this commission.

YOSEMITE NATIONAL PARK.

Remarks of Hon. W. F. Englebright, of California, in the House of Representatives, Thursday, June 2, 1910:

The House being in Committee of the Whole House on the state of the Union and having under consideration the bill (H. R. 25552) making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1911, and for other purposes—

The Clerk read as follows:

Yosemite National Park, California: For protection and improvement of the Yosemite National Park and the construction of bridges, fences, and trails, and improvement of roads other than toll roads, including \$12,000 to be immediately available for necessary material and labor in the installation of a road-sprinkling system, \$62,000.

Mr. FOSTER of Illinois. Mr. Chairman, I move to strike out the last word. I observe in this paragraph there is an increase of \$32,000 over the appropriation of last year for the Yosemite National Park. Is this increase of appropriation necessary for this park? I will ask the gentleman from California (Mr. Englebright), as I understand it is in his country.

Mr. ENGLEBRIGHT. The increase in this appropriation is for the purpose of macadamizing the roads of the valley, and also for the purpose of sprinkling the roads that are now very dusty. We have only two seasons in California, wet and dry. The result is that at this time of the year these roads get very dusty, and it is very necessary that something should be done to make them passable.

Mr. COX of Indiana. Does the Government get any revenue whatever out of that park; and if so, how much?

MR. ENGLEBRIGHT. The revenues run to about \$15,000 a year.

Mr. COX of Indiana. How does it derive them; by license fees?

MR. ENGLEBRIGHT. From rents of buildings and concessions.

MR. KEIFER. Ought not that keep up the road and keep it in condition?

MR. ENGLEBRIGHT. It would keep the roads up if they were in good condition, but they have first got to be macadamized and fixed up.

MR. KEIFER. That road is a narrow road, made by blowing off rocks, in my recollection.

MR. ENGLEBRIGHT. That road needs considerable work to fix it up, because it is a very narrow road.

MR. KEIFER. I have been over it. I did not suppose it had to be sprinkled.

MR. ENGLEBRIGHT. It also has to be macadamized farther up in the valley.

There are but few people in the United States who have not heard of the scenic beauty of this great and only Yosemite Valley. Some of you have seen it, and those of you who have not have read in books and papers of the wondrous scenery of this famous spot and wistfully hope that some day in the future you will have an opportunity to visit and see it.

Painters have patiently endeavored to picture some parts of its beauty and grandeur; they have tried to show the inspiring majesty of the great El Capitan, towering 3,000 feet above your head, a great massive granite cliff, beside which you could place five Washington Monuments, one upon the other, and yet not reach the top, and from which stone enough could be obtained to build a hundred cities.

Travelers have told you of the vastness of that huge naked rock, the Half Dome, rising 5,000 feet above you, bold and steadfast, ideal in its magnificence, inaccessible to the most courageous climber; yet in the unknown past this great granite wonder felt the mighty forces of nature when an awful convulsion of the earth rent it in twain and left it a half dome.

Some of you have seen Clouds Rest, a great mountain of solid rock rising in all its sublimity 6,000 feet above the floor of the valley. Look when you may, you always find a cloud hovering near its summit, likened unto a winged messenger waiting to convey your thoughts to a distant friend who is not with you to enjoy the unparalleled grandeur of the scene.

Many are the treasured pictures that have been made of the towering cliffs that inclose the valley—the Three Graces, Sen-

tinel Rock, Cathedral Spires, the overhanging rock, and so many spots that appeal to lovers of nature—but it is impossible to picture them all, and the painter is yet to live who can duplicate on canvas the marvelous beauty and supreme grandeur of the Yosemite Valley.

Only a poet could have named the Bridal Veil Falls, modest and unassuming as it is. No one dreams when they see it that this veil of water is falling from a height of 940 feet.

And yet that does not compare with the upper Yosemite Falls, so marvelously enchanting in its beauty that it is famed the world over; whose crystal waters, sometimes only like a thread, drop sixteen hundred feet from the summit of the cliffs to the rocks below, and then go on and on, like a thing of life, dropping and dropping another thousand feet to reach the River of Mercy, which flows through the valley.

The Merced River as it comes from the summit of the Sierra Nevadas is a turbulent stream and leaps with a rush 605 feet down over the Nevada Falls, and again 350 feet at the Vernal Falls, then as a cataract roars and tumbles through a mountain gorge until it reaches the valley itself, through which it flows peacefully and quietly, doing its share to help make this valley a paradise for man.

Well do I remember the sight I saw on one of my visits to the valley in the autumn of three years ago. You can visit the valley any time in the year. Nature had clothed the trees in a many-hued foliage with nearly all the colors of the rainbow, and, glance where you would, a pleasant sight met the eye.

With a friend, we had ridden up the trail from the Sentinel Hotel to Glacier Point, climbing thirty-two hundred feet in elevation above the valley—7,214 feet above the level of the sea. We were close to the overhanging rock opposite the Half Dome, which, with all its vastness, seemed to give us greeting. We wished it were possible to step across the impassable chasm. Away down below us lay the peaceful valley, the Merced River, like a tiny streak, winding its sinuous way through it, while Mirror Lake reflected on its silver surface the rocks beyond.

Looking to the east we could see the Nevada and Vernal Falls, and at that height and distance could hear the roar of their falling waters.

There had been a slight fall of snow, which, owing to difference of elevation, had not fallen in the valley below. This made a mantle of white, covering the high mountains. The forests here and there showed their varied colors, and rugged rocks in places made dark spots in the landscape. Mount Starr King, reaching upward 9,200 feet toward the heavens, stood a grand, noble object between us and the summits of the Sierra Nevadas,

which outlined the horizon. Here was true nature, a glorious extended view—beautiful, magnificent, sublime.

But the scene spread out before us was not yet complete, for while we gazed rays of the sun broke through the clouds and there suddenly appeared before us a most beautiful rainbow. Looking again, it was a double one, adding its pure colors to the marvelous view. We stood there pleased, delighted, thrilled, spellbound, and then, awe-inspired by the artistic grandeur of the glorious sight, uncovered our heads in recognition of the Great Ruler of the Universe, who created all.

But the Yosemite Valley is only a small part of the Yosemite National Park. The park itself covers an area of 719,000 acres, and includes the beautiful Hetch Hetchy Valley, the Grand Cañon of the Tuolumne, the Tuolumne Meadows, the Merced and Tuolumne rivers, numbers of high mountains reaching to elevations of 10,000 feet to 13,000 feet above the level of the sea, beautiful trout streams, charming lakes, magnificent forests of pine, oak, and cedar, beautiful shrubs and flowers, a place to see Nature as Nature should be seen; a perfect paradise in summer, where one may live in perfect comfort out of doors half of the year, yet accessible in winter when the snow on the mountains gives a different aspect to the scene.

Not only does this national park contain some of the finest forests of the West, which still stand in all their native beauty, but it also includes the Tuolumne and Merced groves of the wonderful California Big Trees, or Sequoia gigantea, a sight which pays travelers to come thousands of miles from all parts of the earth; trees that are now growing which take you back in time for five thousand years, great grizzly giants, immense in size but wonderfully symmetrical and beautiful, taking rank amongst the great wonders of the world.

The Yosemite National Park is a magnificent inheritance of the American people, set aside for the education and pleasure of all, a great piece of natural scenery to be preserved for all time. It should be well taken care of by the United States. Liberal appropriations should be made for proper roads, trails, buildings, and for every convenience, so that visits to this park can be made as easily as to other places under the care of the Government, and I hope no objection will be made to the appropriation reported by the committee at this time.

EDITORIAL NOTE.—It has been reported in the daily papers that this appropriation has been granted, which marks a considerable increase over appropriations of former years. Congressman Englebright is to be congratulated on the outcome.

COMFORT IN YOUR OUTING BOOTS.

The strength of the chain is that of its weakest link; the speed of a tramping party, that of its slowest walker. Therefore it is essential that every precaution be taken to see that the outing boot be as nearly perfect in its fitting qualities and make up as it possibly can be made. Of one's entire outfit, the boots that cover the organ of greatest resistance, the feet, should receive the most careful attention.

The following suggestions from one who has given the question many years of careful study will not be amiss to the readers of this BULLETIN, and I also hope of some benefit to them.

Outside of the fitting one of the most important questions is "what material to be used," and as no one wishes to carry more weight than necessary, lightness and flexibility as well as strength and durability are most desirable.

The materials to be selected should be in accordance with the local conditions, as to moisture or dryness. If the latter, as in the High Sierra, one should avoid all oils or waterproofing, as being unnecessary, adding extra useless weight and preventing the proper ventilation of the feet. The soles will never hold fast the hob or hungarian nails when waterproofed or oiled. Tan leathers are preferable to black, as they are cooler and easier kept clean.

The outing boot should be made as light in weight as possible, commensurate with solidity, and we should therefore eliminate all unnecessary linings, tips, boxing in the toes, etc., as useless and adding extra warmth and weight.

The plain toes without any tips or boxings are far more comfortable, as there is more chance for evaporation, and less danger of blistering one's toes from irregular deep rooted creases; also freedom from the friction one usually experiences on the edges of tips and boxings in shoes having them.

The soles should be extension all around, with extension heels, thus protecting the uppers, counters and toes from stubbing and cutting against the jagged ends of rocks, etc. Good sole leather outside counters will lengthen the life of an outing boot.

As to the correct height of such boots, that is a matter of preference. Men usually wear their trousers tucked in the tops of their boots. They have no trouble with their slipping down and wrinkling. But women should select a boot of sufficient height (18 inches) to reach well over the curvature of the calf, as it will thus hold up much better, and give less annoyance to the wearer.

Too much attention cannot be given to the fitting of the outing boot. While a careful selection of the length is most necessary, particular care should be given to see that there is not too much

width, as too wide a boot does not properly support the foot in the non-moveable part, the tarso, and allows a friction of which you well know the results.

When the feet are protected, with a properly fitting boot, one need not start out on a journey with misgivings as to their comfort. One need not fear any interference from the greatest annoyance on tramping expeditions, swollen, sore and blistered feet.

F. K.

SIERRA CLUB PINS.

A very attractive Sierra Club pin is on sale at the office of the Secretary. The price in silver or bronze is \$1.00; and in gold, either as a pin or watch-fob, \$3.50. The gold pin is only made to order. Those desiring to have a pin sent by registered mail should send to the Secretary of the Sierra Club ten cents in addition to the above-mentioned price.

SIERRA CLUB STATIONERY.

The official die of the Sierra Club is now at store of Paul Elder & Co., 239 Grant Avenue, San Francisco, who are prepared to execute orders for Club stationery.

This publication is from the press of C. A. Murdock & Co., 68 Fremont Street, San Francisco.

STATE FORESTRY NOTES

A. M. HOMANS, State Forester; WM. C. HODGE, Deputy Forester;
M. SMITH, Jr., Assistant Forester.

A revision of the Forest Laws of California was published by the State Forester in June. Instead of being entitled "Forest Laws" as formerly, the pamphlet is called "A Handbook of Forest Protection" in order to emphasize the forest-fire work. The pamphlet contains rules for the prevention of forest fires, instructions to fire fighters and a list of the State firewardens. Copies may be had on application to the State Forester, Sacramento, Cal.

The season promises to be a dangerous one for forest fires. A number of serious fires have occurred already. The force of wardens, however, both voluntary and paid, is larger and more efficient than ever before.

The State Forester has entered into an agreement with the United States Forest Service for a co-operative study of the rate of growth of Eucalyptus. The object of this study is to obtain definite information as to the yield that may be expected from groves at different ages, planted in forest form.

U. S. FOREST SERVICE NOTES

NATIONAL FOREST The following letter is self-explanatory:
BOUNDARIES.

February 7, 1910.

The President, The White House.

Sir: After having very carefully considered the matter of eliminations from and additions to the National Forests, we respectfully recommend that the following general policy be adopted:

1. Lands wholly or in part covered with brush or other undergrowth which protects streamflow or checks erosion on the watershed of any stream important to irrigation or to the water supply of any city, town, or community, or open lands on which trees may be grown, should be retained within the National Forests, unless their permanent value under cultivation is greater than their value as a protective forest.

2. Lands wholly or in part covered with timber or undergrowth, or cut-over lands which are more valuable for the

production of trees than for agricultural crops, and lands densely stocked with young trees having a prospective value greater than the value of the land for agricultural purposes, should be retained within the National Forests.

3. Lands not either wholly or in part covered with timber or undergrowth, which are located above timber line within the Forest boundary or in small bodies scattered through the Forest, making elimination impracticable, or limited areas which are necessarily included for a proper administrative boundary line, should be retained within the National Forests.

4. Lands not either wholly or in part covered with timber or undergrowth, except as provided for in the preceding paragraphs, upon which it is not expected to grow trees, should be eliminated from the National Forests.

We have the honor to be,

Very respectfully,

Your obedient servants,

(Signed) JAMES WILSON,

Secretary of Agriculture.

(Signed) R. A. BALLINGER,

Secretary of the Interior.

Our 60,000 miles of National Forest boundaries were examined by Forest Service officers during 1909, which will result in the restoration to the public domain of 4,000,000 acres or more of National Forest land. This is something over two per cent. of the total National Forest area. The greater part of this is grazing land, and the changes which are called for in forest land are of minor importance. The greatest restorations were made in Idaho. Since these changes have been announced, a considerable number of protests from stockmen have been received by the United States Department of Agriculture against the eliminations in certain quarters. The latter have learned that a low rental giving them protection is far better than a free range allowing the invasion of nomadic herders. They also assert that the protection afforded the plant growth has increased streamflow and improved the watershed. This is gratifying news, for the policy of regulation, in business, in traffic and the use of our national resources is one of the means of salvation offered this great nation.

W. R. D.

FOREST TAXATION. The opinion handed down by the Maine Supreme Court March 10, 1908, favorable to the State's constitutional right to regulate timber cutting, continues to attract wide attention. State regulation and forest taxation were the principal subjects of the papers presented

at the January meeting of the American Forestry Association. The general conclusions reached seem to be that "State regulation would be unjust, impracticable and unconstitutional, unless preceded by a reform in the methods of taxing forest lands." American Forestry for May prints several of these papers together with an abstract of the opinion of the Maine Supreme Court. What promises to be a genuine contribution to the settlement of this highly important but vexatious question is the co-operative study now carried on by the United States Forest Service and the Wisconsin State Board of Forestry upon the question of forest taxation in that State. They propose to gather statistics of present property values in each town, and the values of the forests, as a basis of their conclusions on the present assessments on forest lands.

W. R. D.

BOOK REVIEWS

EDITED BY WILLIAM FREDERICK BADÈ.

"THE DAWN OF THE WORLD."* Lovers of poetry and romance as well as ethnologists will take delight in "The Dawn of the World," Dr. C. Hart Merriam's most recent volume, which deals with the myths and legends of a single tribe of Indians, the Mewan tribe of California. The stories have been handed down through the generations, the more ancient ones telling of the time when the earth was inhabited by the First People, curious beings, half human, half god-like, but always possessing something of the nature or characteristics of the animals or elements into which they were finally transformed. These First People were the creators, not the progenitors of the Indian people.

The Mewan tribe, while distributed rather widely over Central California, was not nomadic and consequently the mythology and even the language varies somewhat in the villages of the different localities. Thus most of the legends say that Coyote-man, the chief divinity of the First People, made the Indians out of feathers; but the now extinct Bodega Bay Indians believed that the god used sticks of wood, unfortunately of varying degrees of strength and toughness. For the tribes made of oak or madrone were hardy and endured, while they, being made out of the sticks of the sage-herb which are hollow, had little strength and perished early.

The fire myths are particularly beautiful. There was a time, the Indians say, when the world was so dark, cold and foggy that the First People were unable to find food. But they knew that somewhere was the light and warmth that would relieve them of their misery. The First People who afterwards became the Robin and the Humming-bird stole the fire from a far country and brought it down to earth. The Robin's breast now shows where he laid upon it at night to keep it from growing cold. The Humming-bird flew to the far east, where the sun rises and caught a spark from the Star-woman's fire and carried it home under his chin, where the mark shows to this day. The tales having familiar scenes for their setting, like those of the Rock Giant of Tamalpais and the Falcon of Mt. Diablo, will

* *The Dawn of the World.* By C. HART MERRIAM. The Arthur H. Clark Company, Cleveland, 1910. 273 pages and 15 plates. Price, \$3.50.

appeal particularly to the dwellers of the San Francisco Bay region.

The present-day myths, which Dr. Merriam considers separately, are likewise full of poetry, especially the beliefs concerning Ghosts. They tell how the Ghost remains in the body four days after death and then, in invisible form, following the path of the Wind, journeys westward across the ocean to the Village of the Dead. Whirlwinds, they say, are dancing Ghosts. Rainbows come to tell people a new soul is born.

From the ethnologist's standpoint Dr. Merriam's book is invaluable, as many of the tales were told him by the last representatives of villages now deserted, of tribes now extinct; but it is seldom indeed that the lay reader finds such a treasure-house of quaint, poetical conceptions opened before him. The stories are presented to the imagination with a most sympathetic insight into their beauty and significance, and with a charm and simplicity and directness of style that is itself a reflection of an earlier age, of simple natures living nearer the vanished radiance of the world's morning.

*M. R. P.

"PUBLIC RECREATION FACILITIES."*

Open air recreation and its vital influence on both physical and moral well-being, is beginning to occupy the attention of the public as it never has before. It is an encouraging sign to note the gradual awakening to the economic and social, as well as the aesthetic value of parks, whether they consist of a few city squares reclaimed from the rent rolls and devoted to the sports and pastimes of children who would otherwise be in the hands of the police or the juvenile court; or of some great work of nature, some glorious scenic region set apart from the common fate of the wild country and saved from despoliation to add to the total sum of health and happiness, above and beyond the mere husbanding of material resources that has lately occupied the national attention. A recent volume on "Public Recreation Facilities" has been issued by the American Academy of Political and Social Science, a Philadelphia society of some 5,000 members, which publishes annually six volumes devoted to living questions of the day. The present number consists of twenty-eight articles grouped under the general heads of "Typical Parks—National, State, County, and City," and "The Social Significance of Parks and Playgrounds." Many of the papers strongly advocate the preservation of our mountain scenery. Speaking of the proposed Southern Appalachian Park reserve,

* "Public Recreation Facilities." Vol. XXXV, No. 2, of *The Annals of the American Academy of Political and Social Science*, Philadelphia, 1910. Price: cloth, \$1.50; paper, \$1.00.

Prof. Geo. T. Surface, of Yale University, says: "We are well aware of the influences rife for suppressing any movement which, for the well-being of posterity, thwarts the march of predatory gain. It is, therefore, becoming that we emphasize in a way which cannot be misunderstood, the importance of conserving some of nature's stores on a sufficiently large scale, not only to fulfill adequately the urgent demands of this generation, but to meet the more pressing demands of our children and those who shall come after them." . . . "The cities will grow larger and more numerous . . . and so great will be the number needing and seeking recreation that the mountain reservations will afford neither quiet nor privacy, unless large areas be acquired in this generation."

M. R. P.

"HAWAII AND ITS VOLCANOES."^{*}

Dr. Charles H. Hitchcock's recent book, "Hawaii and Its Volcanoes," occupies a unique place among the many books on this interesting subject. Besides giving a very clear exposition of the physiography of the Hawaiian Archipelago, Dr. Hitchcock has collected from many different sources the history of the exploration of the craters of Mauna Loa and Kilauea dating from 1790 to the present. Detailed descriptions of the conditions prevailing in the two craters on the occasions of the various eruptions are quoted from the accounts of eye-witnesses and reproductions are given of the original drawings and maps. John Ledyard, one of Captain Cook's party, made the first known attempt to ascend Mauna Loa in 1779, and his journal is extensively quoted. Photographs of the later eruptions as far back as 1877 give an added interest to this valuable work. Dr. Hitchcock is a professor in Dartmouth College, and one of the charter members both of the Appalachian Mountain Club of Boston and of the Trail and Travel Club of Hawaii.

M. R. P.

"THE MOUNTAIN THAT WAS GOD."[†]

No one who is at all interested in Mt. Rainier should fail to obtain a copy of this book, received too late for review. The splendid illustrations alone make it an invaluable possession to anyone who has ever seen, or who hopes to see, this most glorious mountain of the Northwest.

M. R. P.

^{*} *Hawaii and Its Volcanoes.* By CHARLES H. HITCHCOCK. The Hawaiian Gazette Company, Ltd., Honolulu, 1909. 316 pages, profusely illustrated. Price, \$2.00.

[†] *The Mountain That Was God.* By JOHN H. WILLIAMS, Tacoma, Washington. Price, postpaid: boards, \$1.12; paper, 57 cents.

SUNSET EXPRESS

Daily between San Francisco
and New Orleans, via Los
Angeles and El Paso

One hundred-mile ride along the ocean shores
of the Pacific. Through Southern California
orange groves—rice, cotton and sugar fields of
Texas and Louisiana. Picturesque bayous—
the Teche—Land of Evangeline.

OIL BURNING LOCOMOTIVES
NO SOOT — NO CINDERS

Through Drawing-room Sleepers, Berths,
Sections, Drawing-rooms, Dining, Parlor and
Observation Car Service. Steam heated and
electric lighted throughout.

Through Tourist Car Service to New Orleans,
Washington, Cincinnati, St. Louis and Chicago.

SOUTHERN PACIFIC

TICKET OFFICES:

Flood Building; Market Street Ferry Depot; Third and
Townsend Streets Depot, San Francisco
Broadway and Thirteenth Streets, Oakland

OUTING GOODS

WHICH INCLUDES ALL THE

NECESSARIES FOR OUTINGS IN THE SIERRA

TENTS

SWEATERS

KHAKI CLOTHING

BOOTS AND SHOES

FISHING TACKLE

BLANKETS

LEGGINGS

PACK HARNESS

KNAPSACKS

RUCKSACKS

WATERPROOF SILK FOR SLEEPING BAGS

DYAS-CLINE CO., (Inc.)

214 WEST THIRD STREET, . . . LOS ANGELES, CAL.

GET YOUR
CAMERAS AND KODAKS
NOW

Get accustomed to their use before your
Outing. It will save failures which you cannot
replace.

DEVELOPING AND PRINTING

Ask Sierra Club members who have had us
do their work if it is all right.

R. A. LEET & CO.

—INCORPORATED—

1111 BROADWAY, . . bet. Twelfth and Thirteenth Streets
Oakland, California

CROCKER'S SIERRA RESORT

P. O. Sequoia, Tuolumne Co., Cal.

This celebrated mountain resort, on the Big Oak Flat Road, at the gateway to the Yosemite National Park, improved and modernized.

A place for sojourn and rest in the Sierra Forest. Hot and cold baths, laundry and the best of everything.

Automobilists make this their headquarters, from which they can visit the Yosemite Valley and the peerless Hetch Hetchy in all its unsophisticated beauty. Supplies, pack-horses, and guides for the upper reaches of the Park, Tuolumne Meadows, Lake Tenaya, Tuolumne Canyon, and the finest fishing streams of the Sierra.

Write for rates, stage time table, and further particulars for reaching this resort to above address, or Room 607 Crocker Building, San Francisco.

PHONE OAKLAND 194—HOME PHONE A4194

WHITE-WALLACE CO., Inc.

FLAGS AND SIGNALS

Awnings—Tents—Covers

CANOPIES AND CANVAS WORK
OF EVERY DESCRIPTION

Regulation Sierra Club Dunnage Bags \$1.00
Name and Address Stenciled, 25c. extra. Handles, 25c. extra.

Approved Sierra Light Knapsack, (Rucksack) . . \$1.25

Mail orders for above, upon remittance of prices named, will
be filled promptly by express, carriage charges C. O. D.

SLEEPING BAG COVERS, ETC.

Office, Loft and Factory

1252 Webster Street, Oakland, California.

**NEW ORLEANS-NEW YORK
STEAMSHIP LINE**

THE LINE THAT CONNECTS WITH THE

SUNSET ROUTE

at New Orleans, and which you may include in your rail ticket at no more cost than for an all-rail route to New York.

Two sailings weekly between New Orleans and New York.

Elegant accommodations; Suites of Private Bedroom, Parlor and Bath; Staterooms, Library, Smoking Room, Baths, Promenade Decks, Excellent Cuisine.

Make our handsome new office, Broadway and Twenty-seventh Street, New York, your headquarters when East. Our attendants will be glad to assist you in any way possible. Have your mail addressed in care of the office, and you will receive same immediately on call.

RATES: By rail to New Orleans, steamer thence to New York, including meals and berth on steamer:

First Cabin, . \$77.75 Round Trip, . \$144.40

Second Cabin, \$65.75

Second Class, Rail and Steerage, \$61.45

WRITE OR SEE AGENTS

**SOUTHERN PACIFIC
TICKET OFFICES:**

Flood Building; Market Street Ferry Depot; Third and Townsend Streets Depot, San Francisco

Broadway and Thirteenth Streets, Oakland

OUT-DOOR AND HUNTING BOOKS

THE BLACK BEAR

By WILLIAM H. WRIGHT, author of "The Grizzly Bear."
Illustrated. \$1.00 net; postpaid, \$1.10.

This is the story first of the little black bear, Ben; of his habits, adventures, and characteristics from his birth until he was three or four years old—one of the most interesting and suggestive animal stories that have ever been written. Then the book gives a study of black bears in general from the point of view of the student of natural history and the hunter. Mr. Wright, who is well known for his standard book on the grizzly, has given here an extraordinarily interesting and valuable account of the best known of the bears, a complete, accurate, and satisfactory and delightfully written book. It is a book that every boy will read with absorbing interest and that every man will like.

"Mr. Wright's narrative is delightfully fresh and unaffected. In temper his attitude is equally removed from the exaggeration of the sentimental and that of the dry scientist. He has a quiet humor and sincerity, and his book is rich in interesting facts."—*The Brooklyn Daily Times*.

THE GRIZZLY BEAR

Superbly illustrated. \$1.50 net; postpaid, \$1.65.

"Full of the atmosphere of the big game woods and vibrant with hazards of the chase."—*Boston Globe*.

"The very spirit of the grizzly is in subtle fashion brought near us. The book will long hold high place in the literature of sport."—*New York Tribune*.

CHARLES SCRIBNER'S SONS

153 FIFTH AVENUE, NEW YORK

Goldberg, Bowen & Co.

FOUNDED 1850

We offer the choicest groceries from the world's best sources of supply, in their pristine purity, uniformity and freshness.

Care, attention, and vigilance are exercised in the selection of all commodities, and therefore the best quality will be found in a large and varied stock.

We know just what you require for the camping-trip. Write us the number in the party and the length of the trip, and we will be pleased to figure on supplies that will last the entire trip. Canned and condensed soups, beef extracts, potted and deviled meats, and soothing beverages are most essential, and we have a varied assortment of these.

Ask for a copy of the Master Grocer.

GOLDBERG, BOWEN & CO.

GROCERS

IN SAN FRANCISCO: 242 Sutter Street; 2229 California Street; 1401 Haight Street. Main Store and Shipping Dept., 242 Sutter Street.

IN OAKLAND: Thirteenth and Clay Streets.

Everything that is Practical and Necessary for

YOUR OUTING TRIP SPECIALTIES:

Fishing Tackle	Dunnage Bags
Mountain Boots and Shoes	Mosquito Head Nets
Sleeping Bags	Rubber Blankets
Air Mattresses	Folding Boats
Canvas and Leather Leggings	
Khaki Suits to Order for Ladies and Gentlemen	
Special Eiderdown Sleeping Bags	
Waterproof Silk	

GOLCHER BROS.

(Formerly of Clabrough, Golcher & Co.)

510 Market Street, Telephone Temporary 1883 San Francisco



Sierra Tramping Boots

NAP-A-TAN
OUTING
BOOTS

For Men and Women

The first need of your prospective tramp. Tramping Boots must be comfortable and

— STAND THE RUB —

NAP-A-TAN will meet every need
YOU CAN LIVE IN THEM

Careful attention given to the fitting. Mail Orders promptly filled.

OPEN SATURDAYS TILL 10 P. M.

KOENIG'S
KEARNY AT POST ST.
SAN FRANCISCO, CAL.

The Marsh-Girvin Co.

SPECIALISTS FOR
MOUNTAINEERING PHOTOGRAPHY

All sorts of supplies for unusual as well as usual conditions.

Let us help you select your outfit NOW, and show you its working methods, so you will be acquainted, and use it to best advantage on your OUTING.

Developing and printing in the highest style of the art to obtain all the values of your OUTING exposures.

We have just acquired a complete set of Yosemite National Park negatives. To those wishing something new and different in Park pictures we offer them for inspection.

THE MARSH-GIRVIN CO.

Phone Douglas 1591

**712 Market Street, Opposite
Call Building San Francisco**

SIERRA CLUB MEMBERS

Say that "NAP-A-TANS" Boots
and Shoes stand the wear.
"WHY"?

They are made specially for you of selected material of the toughest kind that is soft and pliable, made on nature-shaped lasts that give "FOOT-COMFORT."

We carry them in all sizes, widths and heights for women, men and children.

**ASK TO SEE OUR
SPECIAL SIERRA TRAMPING BOOTS**

For Ladies, 18 in. high; for Men, 14 in. high. Made with hand-welted overweights outsoles, outside counter, full extension of shank on inside to protect foot. Made with plain toe cap or with tips.

Mail Orders promptly attended to.

C. J. HEESEMAN, Sole Agent

**1107-17 WASHINGTON STREET
OAKLAND, CAL.**

Phone — Oakland 2266 .. ALSO AT .. Phone — Berkeley 150
WALKOVER SHOE STORE, . . . 41-43 South First Street, San Jose, Cal.



Co.
con-
show
, and
f the
sures.
tional
d dif-
cisco

BY DAYLIGHT AND
ALL RAIL TO

YOSEMITIE VALLEY

VIA

SOUTHERN PACIFIC

By way of Merced, in connection with the Yosemite Valley Railroad.

Only ten hours' ride to El Portal (the edge of the Valley) and three-and-a-half hours to the Heart of the Valley.

Low side trip rates to Wawona and the Mariposa Grove of gigantic trees.

Leave San Francisco Daily 8:20 a.m.

Ask any of our Agents for details, or write CHAS. S. FEE, Passenger Traffic Manager, SOUTHERN PACIFIC COMPANY, San Francisco, for beautifully illustrated descriptive literature.

IN 3 DAYS

SAN FRANCISCO
“OVERLAND LIMITED”

—TAKES YOU TO—
CHICAGO

**Across Great Salt Lake and
High Sierra by Daylight**

Luxurious High Class Equipment
Electric Lighted Throughout

Pullman Drawing-room Stateroom
Vestibuled Sleeping Cars

CAREFUL AND ATTENTIVE DINING SERVICE

Parlor Observation Car with Library and Gate,
Ladies' Reading Room, Gentlemen's
Smoking Room

**DAILY NEWS BULLETINS
LATEST PAPERS AND MAGAZINES**

SOUTHERN PACIFIC

D"

and

C

VICE

Gate,

IC

N

N

N

N

N

C

No.

Co

No.

No.

No.

No.

No.

No.

No.

I

O

No.

I

No.

PUBLICATIONS OF THE SIERRA CLUB

No. 1.—Articles of Association, By-Laws, and List of Members.

Nos. 4 and 5.—Maps of Portions of the Sierra Nevada adjacent to the Yosemite and to King's River, 1893.

No. 8.—Table of Elevations within the Pacific Coast, 1895, by Mark B. Kerr and R. H. Chapman.

No. 12.—Map of the Sierra Region, May, 1895.

Nos. 2, 3, 6, 7, 9, 10, 11, 13, together forming Volume I., Nos. 1-8, of the *SIERRA CLUB BULLETIN*.

Contents of Volume I.—Ascent of Mt. Le Conte; Address on Sierra Forest Reservation; California Outing; Crater Lake, Oregon; Diamond Hitch; Explorations North of Tuolumne River; Forest Reservations; From Fresno to Mt. Whitney, via Roaring River; From Gentry's to El Capitan and Yosemite Falls; Grand Cañon of the Tuolumne; Head-Waters of King's River; Kern and King's River Divide; King's River and Mt. Whitney Trails; Knapack Tours in the Sierra; Mt. Bernard; Mt. Tahoma; Mt. Whitney Trail; New Grove of Sequoia Gigantea; Notes on the Pine Ridge Trail; Route up Mt. Williamson; Search for a Route from the Yosemite to the King's River Cañon; Sources of the San Joaquin; Three Days with Mt. King; Through Death Valley; Through the Tuolumne Cañon; Tramp to Mt. Lyell; Upper Sacramento in October; Notes, Correspondence, and Reports.

Nos. 14, 15, 16, 17, 18, and 19, together forming Volume II., Nos. 1-6, of the *SIERRA CLUB BULLETIN*.

Contents of Volume II.—Ascent of the White Mountains of New Mexico; Basin of the South Fork of the San Joaquin River; Conifers of the Pacific Slope, Parts I and II; Day with Mt. Tacoma; Early Summer Excursion to the Tuolumne Cañon and Mt. Lyell; Expedition of Prince Luigi Amedeo of Savoy to Mt. St. Elias; Explorations of the East Creek Amphitheater, from Mt. Rose to Mt. Shasta and Lower Buttes; Kaweah Group; Lava Region of Northern California; Mountain Trips: What to Take and How to Take It; Neglected Region of the Sierra; Observations on the Denudation of Vegetation—Suggested Remedy for California; On Mt. Lefroy August 3, 1896; On Mt. Lefroy August 3, 1897; Philip Stanley Abbot; Taking of Mt. Balfour; To Tehipite Valley from the King's River Grand Cañon; Up and Down Bubb's Creek; Wanderings in the High Sierra Between Mt. King and Mt. Williamson,—Parts I and II; Woman's Trip Through the Tuolumne Cañon; Yosemite Discovery; Notes, Correspondence, and Reports.

No. 20.—Volume III., No. 1, pp. 1 to 118—Ramblings Through the High Sierra (Reprinted from "A Journal of Ramblings," privately printed in 1875); Editorial Notice; Ouzel Basin; Forestry Notes.

No. 21.—Ramblings Through the High Sierra. Same as No. 20. (Specially bound; without Editorial Notes, etc.)

No. 22.—Volume III., No. 2, pp. 119 to 188.—Lake Tahoe in Winter; Ascent of "El Yunque"; Another Paradise; King's River Cañon Trail Notes; Ascent of "Matterhorn Peak"; Reports; Notes and Correspondence; Forestry Notes.

No. 23.—Volume III., No. 3, pp. 189 to 270.—Parks and Peaks in Colorado; The Work of the Division of Forestry in the Redwoods; The Mazamas on Mt. Jefferson; Wagon-Trips to the Sierra; The Big Basin; The Re-Afforesting of the Sierra Nevada; The Descent of Tenaya Cañon; An Ascent of Cathedral Peak; A Glimpse of the Winter Sierra; Notes and Correspondence; Forestry Notes.

No. 24.—Volume III., No. 4, pp. 271 to 339.—The Mazamas on Mt. Rainier; Lassen Buttes; From Pratherville to Fall River Mills; Zonal Distribution of Trees and Shrubs in the Southern Sierra; Mt. Washington in Winter; Round About Mt. Dana; Notes and Correspondence; Forestry Notes; Reports.

No. 25.—Volume IV., No. 1, pp. 1 to 75.—Joseph Le Conte in the Sierra; El Capitan; Camp Muir in Tuolumne Meadows; The Sierra Club Outing to Tuolumne Meadows; In Tuolumne and Cathedral Cañons; The Great Spruce Forest and the Hermit Thrush; From Redding to the Snow-clad Peaks of Trinity County; Trees and Shrubs in Trinity County; Notes and Correspondence; Forestry Notes; Reports.

No. 26.—Vol. IV., No. 2, pp. 77 to 176.—Into the Heart of Cataract Cañon; My Trip to King's River Cañon (Reprint); Conifers of the Pacific Slope, Part III; Birds of the High Mountains; Notes and Correspondence; Forestry Notes; Reports.

No. 27.—A Flora of the South Fork of King's River from Millwood to the Head-Waters of Bubb's Creek.

PUBLICATIONS OF THE SIERRA CLUB—Continued.

No. 28.—Vol. IV., No. 3, pp. 177 to 252.—Among the Sources of the South Fork of King River, Part I; With the Sierra Club in King's River Cañon; Red-and-White Peak; the Head-Waters of Fish Creek; Mt. Whitney, Whitney Creek, and the Poison Meadow Trail; A New-Year Outing in the Sierra; The Ascent of Volcano Mayon; Notes and Correspondence; Forestry Notes; Reports.

No. 29.—Vol. IV., No. 4, pp. 253 to 323.—Among the Sources of the South Fork of King River, Part II; the Coast Sierra from California to Panama; Ralph Sidney Smith (Memoriam); Climbing Mt. Brewer; Table of Elevations of Peaks in the Sierra Nevada; Mountains over 12,000 feet; King's River Outing, 1903—Botanical Notes, etc.; Near Kern's Grand Cañon; Reports; Notes and Correspondence; Forestry Notes.

No. 30.—Vol. V., No. 1, pp. 1 to 85.—The Ascent of the North Palisades; Variations in Sierra Glaciers; How Private Burns Climbed Mt. Pinatubo; The Hillside Farmer in the Forest; The Notable Mountaineering of the Sierra Club in 1903; On the Trail in the Sierra Club; The Completed Le Conte Memorial Lodge; Reports; Notes and Correspondence; Forestry Notes.

No. 31.—Vol. V., No. 2, pp. 87 to 152.—Mt. Whitney as a Site for a Meteorological Observatory; The Water-Ouzel at Home; The San Francisco Peaks in April; On Harrison's Pass with Animals; The Ascent of San Antonio; Secretary's Report; Treasurer's Report; Notes and Correspondence; Forestry Notes.

No. 32.—Vol. V., No. 3, pp. 153 to 270.—First Ascent: Mt. Humphreys; Address at Memorial Exercises; Mt. Lyell and Mt. Ritter Ascents by Sierra Club Outing of 1903; A Deer's Bill of Fare; Domes and Dome Structure of the High Sierra; Some Aspects of a Sierra Club Outing; The Evolution Groups of Peaks; Reports; Notes and Correspondence; Book Reviews; Forestry Notes.

No. 33.—Vol. V., No. 4, pp. 271 to 328.—The Grade Profile in Alpine Glacial Erosion; Systematic Asymmetry of Crest-Lines in the High Sierra of California; The Tuolumne Cañon; Inscription for the Le Conte Memorial; Over Harrison's Pass from the North with a Pack-Train; California Forestry Law; Reports; Notes and Correspondence; Book Reviews; Forestry Notes.

No. 34.—Vol. VI., No. 1, pp. 1 to 74.—The Sierra Club's Ascent of Mt. Rainier; Mt. Rainier, Mt. Shasta, and Mt. Whitney as Sites for Meteorological Observatories; The Sky-Line of the Tatoosh Range, Mt. Rainier National Park; The Effect of the Partial Suppression of Annual Forest Fires in the Sierra Nevada Mountains; In Memoriam; Joseph Le Conte; Wild Animals of Mt. Rainier National Park; The Sierran Puffball; Reports; Notes and Correspondence; Book Reviews; Forestry Notes.

All of above are out of print, having been destroyed in the fire of April 18, 1906.

No. 35.—Vol. VI., No. 2, pp. 75 to 152.—An Ascent of the Matterhorn; The Name "Mt. Rainier"; The Second King's River Outing; The Motion of the Nisqually Glacier; Mt. Rainier; Report on the King's River Cañon and Vicinity; Reports; Notes and Correspondence; Book Reviews; Forestry Notes; Revised By-Laws of the Sierra Club.

No. 36.—Vol. VI., No. 3, pp. 153 to 210.—The Aftermath of a Club Outing; Along the Foothills to Lake Chabot; Mt. Rose Weather Observatory; The Ascent of Asama-Yama; Reports; Secretary's Report; Treasurer's Report; Notes and Correspondence; Book Reviews; Forestry Notes.

No. 37.—Vol. VI., No. 4, pp. 211 to 284.—The Hetch-Hetchy Valley; To Joseph Le Conte, a Poem; Lake Ramparts; The Grand Cañons of the Tuolumne and the Merced; The Water-Ouzel, a Poem; Photograph of the Water-Ouzel; Bird Life of Yosemite Park; An Easterer's Impressions of a Sierra Club Outing; Indian Pictographs of the Paté Valley; Reports; Notes and Correspondence; Book Reviews; Forestry Notes.

No. 38.—Vol. VI., No. 5, pp. 285 to 336.—William Kent's Gift; Redwoods; The Mt. Rainier Knapsack Trip; A Knapsack Trip to Mt. Ritter; The Yosemite Waters; Snowfall in the Sierra Nevada; Reports; Notes and Correspondence; Book Reviews; Forestry Notes.

No. 39.—Vol. VII., No. 1, pp. 1 to 84.—The High Mountain Route Between Yosemite and the King's River Cañon; With the Sierra Club in the Kern Cañon; Down the Kaweah; An August Outing in the Upper Merced Cañon; Organization of Sierra Club; Reports; Notes and Correspondence; Book Reviews; Forestry Notes.

No. 40.—Vol. VII., No. 2, pp. 85 to 140.—Camping Above the Yosemite—A Summer Outing With the Sierra Club; From Kern Cañon to Giant Forest—The Chronicle of a Knapsack Trip; Up From "The Land of Little Rain" to the Land of Snow, Being the Journal of a Sledging Trip Up Mt. Whitney in Winter; Reports; Notes and Correspondence; Forestry Notes; Book Reviews.

No. 41.—Vol. VII., No. 3, pp. 141 to 214.—The Observatory on Mt. Whitney; The Great Circuit of the Yosemite National Park—Down Tenaya Cañon; On Mt. St. Helens With the Mazamas; A High Sierra Circuit on Headwaters of King's River; Organization of the Sierra Club; Reports; Notes and Correspondence; Forestry Notes; Book Reviews.

ed.

The Fork of King Creek; White Peak in the Sierra Nevada; Poison Meadow; Canyon; Notes

The Fork of King Creek; Sidney Smith; The Sierra Nevada; Etc., etc.; Near Bishop; Notes

Notes; Variations in the Farmer's Trail; Notes and Comments

Geological Observations in April; Geologist's Report; Trees

Address at McWayne's Outing of 1905; Some Aspects of Notes and Correspondence

Glacial Erosion; The Tuolumne River from the North; Correspondence

Baker; Mt. Rainier; The Sky-Line; Partial Suppression of Moriam; Johnson; Gifford Pinchot; Report

April 18, 1906.

The Name "Mammoth"; Equally Glacial Products; Notes on the Sierra Nevada; Hiking; Along the Ancient of Ascents; Correspondence

Joseph Le Conte; Merced; The Valley of Yosemite; Pictographs; Forestry Notes; The Mt. Rainier Snowfall in 1905; Forestry Notes; Between Yosemite and Down the Kern; of Sierra Club

Summer Outing; Case of a Knapsack; the Journal of Forestry; Forestry Conference

Glacier; The Great St. Helens; Washington Organization; Book Review